

CLASS 53, PACKAGE MAKING**SECTION I - CLASS DEFINITION**

This class is the generic class of apparatus for and methods of encompassing, encasing or completely surrounding goods or materials with a cover made from sheet material stock.

- (1) Note. This class does not provide for methods of permanently encompassing, encasing, or immobilizing hazardous or toxic waste. Methods of packaging binding and immobilization of hazardous or toxic waste for the sole intent of permanently containing the waste are found elsewhere. Methods of packaging to move potentially hazardous or potentially toxic materials through commerce where the materials are removed from the container for subsequent use or treatment are proper for this class (53).

This class is also the generic class of apparatus for and methods of partially encasing or surrounding goods and materials by a partial cover made from sheet material stock, which completely encircles and is in frictional contact with the goods or materials so as to be retained thereon.

This class is also the generic class of apparatus for and methods of assembling and/or securing a separate closure (hood, cap, capsule, crown, seal, cork, disk, cot, etc.,) to the aperture of preformed receptacle so as to complete the encasement of contents. Assembling includes any manipulation or handling of the receptacle resulting in the sealing of a filling orifice by the closure.

This class is also the generic class of apparatus for and methods of depositing articles and arranging fluent materials in preformed receptacles. See subclasses 235+.

This class is the residual class of apparatus for and methods of subjecting the contents to a treatment before, during or after packaging combined with the packaging operation not otherwise provided for. Treatment includes plural diverse manufacturing provided for elsewhere (see References to Other Classes below)

This class is also the generic class for apparatus for, and processes of, making match books.

This class also includes apparatus for exposing the contents of a package by opening one or more folds of the cover.

The apparatus and processes in this class include the shaping of the cover about the article, the partial or complete shaping of the cover followed by a filling operation, the filling of a preformed receptacle with articles and the filling of a preformed receptacle followed by a closing operation. The apparatus and processes in this class include the application of wrappers and encircling bands and labels, and the application of partial covers encircling the contents.

The apparatus and processes in this class may include the making of the cover prior to packaging and/or the treatment of cover before, during or after packaging..

The apparatus and processes in this class include the printing and/or embossing of the contents and/or the cover, the coating of the package, the making and/or applying of cover opening adjuncts such as tear strips, and the application of a strand, handle, strip, stamp, and/or label to the package.

The apparatus and processes in this class include the association of articles into groups for packaging, and also include the packaging of individual units followed by a grouping of such units for further packaging, whether or not the further packaging is claimed.

The apparatus and processes in this class encase or encompass goods and materials with a cover, which serves for identifying, protecting or unit handling the goods or materials. The cover is usually removable from the contents when the latter is used. However, some exceptions are found to this removal including, e.g., match books, capsules and tea bags.

EXPLANATORY NOTE ON SCOPE OF CLASS

Class 53 was designed with the purpose of recognizing that the packaging of manufactured products so that they may pass through the channels of trade in a safe, convenient and attractive condition, is an art deserving of a separate status in the system of classifying inventions.

Heretofore, for the most part, the packaging operation was treated either as an appendage to the manufacture of the product to be

packaged or as a special instance of container manufacture. Neither was in accord with the activities of those who devise packaging machinery or processes, who are neither the manufacturers of the product nor of the packaging materials.

Where patent claims include subject matter limiting the process or apparatus to use in manufacturing a particular article other than as specifically provided for in the definition below such patent is excluded from this class and will be found in the class best providing for making said article. If the claims merely recite, by name, the article being manufactured but the process or apparatus is of general utility, such recitation alone will not exclude the patent from this class.

Since it is not desirable to withhold from use those portions of the reclassification which can be completed and handled as a unit, Class 53 was established even though numerous inventions pertaining to the art of packaging are as yet represented therein only by search notes to other classifications.

The art relating to filling and closing and closing, per se, of preformed receptacles, and depositing articles in preformed receptacles, formerly classified in Class 226, Filling and Closing Portable Receptacles, is now classified in appropriate subclasses of this class (53) unless otherwise excluded by the notes to the various subclasses herein.

SECTION II - LINES WITH OTHER CLASSES AND WITHIN THIS CLASS

A. PACKAGING AND BINDING ELSEWHERE CLASSIFIED

Banding apparatus is found in this class, subclass 582 and the corresponding processes are found in subclass 399. Banding machines and processes, either, per se, or combined with other machines or steps, are also found in many places; for which see the search notes below to Textiles: Presses; and Tobacco.

Combined packaging and binding apparatus is found in this class, subclasses 138.6+, and corresponding processes are found in subclasses 410+. Because the related arts have often treated banding and binding as equivalents, the references to the Binding art refer back to this

section, rather than to the section on Other Covering, below. Binding machines and processes, either per se or combined with other machines or steps, are also found in many places, see the notes under Search Class to classes for textiles: manufacturing; harvesters; presses; manufacturing container or tube from paper; or other manufacturing from a sheet or web.

Since practically all packaging and binding elsewhere classified includes not only packaging and binding, per se, but the combination therewith of other devices or steps no attempt to distinguish between the references to packaging and binding, per se, and to combined packaging and binding, has been made.

Methods of packaging, binding, and immobilization of hazardous or toxic waste for the sole intent to permanently containing the waste are found in Class 588. Methods of packaging to move hazardous or toxic materials through commerce where the materials are removed from the container for subsequent use or treatment are proper for Class 53.

See References to Other Classes below that reference this section.

B. OTHER COVERING

Since covering is a form of assembly, reference is made to the notes to Class 29, Metal Working, See the Search Class note below referencing this section.

Because the related arts have often treated banding and binding as equivalents, references to the binding art have been placed in "Packaging And Binding Elsewhere Classified," above, rather than in this section. See References to Other Classes, below, that reference this section for other covering classes.

C. PACKAGES, AND PACKAGED AND BANDED ARTICLES

Capsules are found in several other classes. See References to Other Classes, below, that reference this section.

D. PACKAGING AND BINDING SUBCOMBINATIONS

See the article dispensing class for article dispensers (feeders) not otherwise provided for.

For cutting and/or scoring sheets for cover blanks, and for cutting combined with form-scoring; and for form-

scoring generally of a sheet or web, see the Search Class references below.

SECTION III - SUBCLASS REFERENCES TO THE CURRENT CLASS

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 235+, for apparatus for and methods of depositing articles and arranging fluent materials in pre-formed receptacles.
- 111+, 428+ for apparatus for and methods of subjecting the contents to a treatment before, during or after packaging combined with the packaging operation not otherwise provided for. See particularly subclasses 111+ and 428+. Treatment includes plural diverse manufacturing provided for, per se, elsewhere.
- 394+, for apparatus for, and processes of, making match books.
- 140, 141, 208, 289, 290+, and 545+ for the apparatus and processes in this class including the making of the cover prior to packaging and/or the treatment of cover before, during or after packaging.
- 128.1+, 410+, for the apparatus and processes in this class including the printing and/or embossing of the contents and/or the cover, the coating of the package, the making and/or applying of cover opening adjuncts such as tear strips, and the application of a strand, handle, strip, stamp, and/or label to the package.
- 147+, 443+ for apparatus and processes in this class including the association of articles into groups for packaging, and also include the packaging of individual units followed by a grouping of such units for further packaging, whether or not the further packaging is claimed.

SECTION IV - REFERENCES TO OTHER CLASSES

SEE OR SEARCH CLASS:

- 2, Apparel, subclass 58 for methods of making arm pit shields. (See "A. Packaging And Binding Elsewhere Classified" above).
- 2, Apparel, subclasses 53+ for arm pit shields which are formed by encasing an adsorbent material, subclass 66 for muffs, subclasses 267+ and see the Notes thereto for encased garment pads. (See "Packages, And Packaged And Banded Articles" above).

- 5, Beds, subclasses 636+ for pillows, and subclasses 690+ for mattresses. (See "Packages, And Packaged And Banded Articles" above).
- 24, Buckles, Buttons, Clasps, etc., subclass 16 for bale and package ties. (See "Packaging And Binding Subcombinations" above).
- 28, Textiles: Manufacturing, subclasses 289+ for machines to form skeins of filamentary stock, such as yarn, ribbon, etc., and to gather and secure the stock into a package by means of a strand, and see (2) Note above. See subclasses 118+ and 121 for tampon or compacted fiber making, (see "A. Packaging And Binding Elsewhere Classified" above).
- 29, Metal Working, subclasses 428+ for a process of assembling generally, and subclasses 505+ thereunder for deforming a metal tie around a bag neck. The apparatus for such is classified in Class 29, subclasses 33.5+ and 243.57+. (See "Packaging And Binding Subcombinations" above).
- 29, Metal Working, subclasses 33+ for plural diverse manufacturing; subclasses 400.1+, for processes, not otherwise provided for, including assembly of parts, one of which may be a cover or band, and subclasses 33.5+ and 243.57+ for band-type bag closure applying means. (See "A. Packaging And Binding Elsewhere Classified" above).
- 29, Metal Working, subclass 234, for assembling of a tube and a coextensive core, subclasses 400.1+, for processes of assembly and to the notes to subclasses 700+, for apparatus for assembly, and particularly subclass 724, for means for assembling a ball or roller bearing into races and subclasses 592.1+. (See "Other Covering" above).
- 47, Plant Husbandry, subclass 56 for strips or ribbons to which seeds are secured in spaced relation. (See "Packages, And Packaged And Banded Articles" above).
- 52, Static Structures (e.g., Buildings), subclasses 742.1+ for a process relating to filling a cavity in an in situ erected building structure. (See "A. Packaging And Binding Elsewhere Classified" above).
- 54, Harness for Working Animal, subclasses 65+ for harness pads. (See "Packages, And Packaged And Banded Articles" above).
- 56, Harvesters, subclasses 432+ for combined compressing and binding, and see (2) Note above. (See "A. Packaging And Binding Elsewhere Classified" above).

- 57, Textiles: Spinning, Twisting, and Twining, subclasses 3+ for apparatus for, and subclass 362 for processes of spirally covering or wrapping a core of indefinite length, and see (1) Note above. (See “A. Packaging And Binding Elsewhere Classified” above).
- 57, Textiles: Spinning, Twisting, and Twining, subclasses 210+ for spirally wrapped or covered cores of indefinite length. (See “Packages, And Packaged And Banded Articles” above).
- 66, Textiles: Knitting, subclasses 9, 80 and 190 for incorporating unknit material into a knit tube of indefinite length. (See “A. Packaging And Binding Elsewhere Classified” above).
- 66, Textiles: Knitting, subclasses 190+ for a knit tube of indefinite length having unknit material incorporated therein. (See “Packages, And Packaged And Banded Articles” above).
- 69, Leather Manufactures, subclass 4 for apparatus for stuffing padding material into horse collars.
- 72, Metal Deforming, subclasses 409+ for disclosure of a plier type tool usable in applying a wire band. (see “A. Packaging And Binding Elsewhere Classified” above).
- 79, Button Making, subclass 5 for making cloth covered buttons. (See “A. Packaging And Binding Elsewhere Classified” above).
- 83, Cutting, for cutting and/or scoring sheets for cover blanks,
- 86, Ammunition and Explosive-Charge Making, subclasses 23+ for ammunition loading, especially subclasses 25+ for loading and closing, subclasses 29+ for filling and ramming, subclasses 31+ for filling, and subclasses 47+ for cartridge packing. (See “A. Packaging And Binding Elsewhere Classified” above).
- 86, Ammunition and Explosive-Charge Making, subclasses 31+ for filling, subclasses 36+ for capping and uncapping, subclasses 39+ for crimping and subclasses 45+ for feeding devices. (See “Packaging And Binding Subcombinations” above).
- 87, Textiles: Braiding, Netting, and Lace Making, subclass 6 for methods of and subclass 29 for apparatus for making tubular fabrics with cores (see “A. Packaging And Binding Elsewhere Classified” above).
- 87, Textiles: Braiding, Netting, and Lace Making, subclass 6 for tubular fabrics with cores. (See “Packages, And Packaged And Banded Articles” above).
- 99, Foods and Beverages: Apparatus, appropriate subclasses particularly subclass 140 for capsulated condiments (see “Packages, And Packaged And Banded Articles” above).
- 100, Presses, subclasses 1+ for methods and apparatus for applying a flexible filament, strand or band binder. (See “A. Packaging And Binding Elsewhere Classified” above).
- 100, Presses, subclass 101 for presses having means for folding a cloth to enclose it in the material to be pressed. (See “Other Covering” above).
- 100, Presses, subclasses 1+, particularly subclass 34 for holders for material during manual application of a binder. (See “Packaging And Binding Subcombinations” above).
- 112, Sewing, appropriate subclasses, particularly subclass 11 for devices to sew filled sacks, subclass 470.21+ for stringers, 470.35 for sewing covers on spherical objects, and subclasses 475.17+ for methods of forming stitches. (See “Packaging And Binding Subcombinations” above).
- 118, Coating Apparatus, appropriate subclasses for apparatus for applying a complete or partial coating, including therein devices for completely immersing a package, and for applying adhesive to parts of a cover. (See “A. Packaging And Binding Elsewhere Classified” above).
- 118, Coating Apparatus, appropriate subclasses for apparatus for applying a complete or partial coating, including devices for completely immersing a package. (See “Other Covering” above).
- 118, Coating Apparatus, appropriate subclasses for apparatus for applying adhesive to parts of a cover. (See “Packaging And Binding Subcombinations” above).
- 128, Surgery, subclass 272 for medicator containers of the capsule type, which may be of dispensing type. (See “Packages, And Packaged And Banded Articles” above).
- 131, Tobacco, appropriate subclasses for apparatus for and methods of treating tobacco, and making tobacco products, especially subclasses 280+ for methods of and apparatus for making cigarettes and cigars. (See “Packaging And Binding Subcombinations” above).
- 131, Tobacco, appropriate subclasses, especially subclasses 280+ for methods of and apparatus for making cigarettes and cigars, which making constitutes, in a final analysis, a mere packaging of tobacco within a wrapper or receptacle, subclasses 282 and 283 for methods of and

- apparatus for making tobacco products and packaging them, and subclass 107 for processes of and apparatus for bundling or banding a plurality of cigars or cigarettes (see “A. Packaging And Binding Elsewhere Classified” above).
- 131, Tobacco, subclasses 347+ for tobacco products, especially subclasses 360+ for cigars and cigarettes which, in the final analysis constitute a mere package of tobacco within a wrapper or receptacle. (See “Packages, And Packaged And Banded Articles” above).
- 141, Fluent Material Handling, With Receiver or Receiver Coacting Means, for methods of and apparatus for filling receivers (receptacles) with fluent materials where making of the receptacle is not involved or where the receiver is self closing. Class 141 takes systems for filling receivers which close upon separation or uncoupling from the supply (e.g., valved bags, aerosols). See particularly subclasses 38, 68, 76, 315, and 329, but also see subclass 424 of this class (53). Class 141 also takes treatment of the contents material before, during or after placement in the receiver provided the treatment is not of the manufacturing type. See the notes and definitions to subclasses 69+ of that class (141) and the Search Note in subclass 111 of this class for the limitations as to the type treatment which Class 141 will take. Class 141 also takes gas filling and/or evacuating of receivers where no closing is included. See particularly subclasses 4+, 37+ and 65+. (See “A. Packaging And Binding Elsewhere Classified” above).
- 144, Woodworking, subclasses 50+ for match making with or without packaging, especially subclass 61 for packaging, per se, of matches. (See “A. Packaging And Binding Elsewhere Classified” above).
- 144, Woodworking, subclasses 50+ for match making, especially subclass 51 for making of match combs for insertion into match books. (See “Packaging And Binding Subcombinations” above).
- 156, Adhesive Bonding and Miscellaneous Chemical Manufacture, appropriate subclasses as the generic home for processes and apparatus for making articles of manufacture by a laminating process. That class (156) also provides for adhering labels, strips or stamps, etc., to packages as well as subcombinations of making a container part limited to laminating. This class (53) takes such steps or devices combined with packaging, and will also take banding an article or package where the band does not adhere to the package or article, but only to itself, except where cover material is preliminarily formed from a fluent material by Class 264, Plastic and Nonmetallic Article Shaping or Treating: Processes operation which is provided for in Class 156. (See “A. Packaging And Binding Elsewhere Classified” above).
- 156, Adhesive Bonding and Miscellaneous Chemical Manufacture, appropriate subclasses for package making subcombinations relating to the manufacture of laminated stock material or seam or joint forming. This class (53) takes package seam forming where means are provided to handle the package. See also, subclasses 441.5+ for envelope moistening and sealing apparatus. (see “Packaging And Binding Subcombinations” above).
- 192, Clutches and Power-Stop Control, subclasses 125+ for power-stop control of packaging machines, or subcombinations thereof, wherein the machine or subcombination is broadly claimed, especially subclass 126 for sheet material control. (See “A. Packaging And Binding Elsewhere Classified” above).
- 192, Clutches and Power-Stop Control, subclasses 125+ for power-stop controls in general, especially subclass 126 for sheet material control.
- 193, Conveyors, Chutes, Skids, Guides, and Ways, appropriate subclasses for conveyors of the chute, skid, guide and way type, per se. (See “Packaging And Binding Subcombinations” above).
- 198, Conveyors: Power-Driven, appropriate subclasses for power-driven conveyors, particularly subclasses 373+ for a conveyor having means for changing the attitude of the conveyed load relative to the conveying direction. (see “Packaging And Binding Subcombinations” above).
- 206, Special Receptacle or Package, subclass 484 for a laminate packet; subclasses 46+ for capsulated material in general. (see “Packages, And Packaged And Banded Articles” above).
- 206, Special Receptacle or Package, appropriate subclasses, for a container, particularly, configured to hold a specific article or material-including article(s) or material(s) put up as a mercantile unit, particularly subclasses 20+ for special receptacles for matches, subclass 29 for match packages, subclasses 46+ for capsulated material in general, and see Note, above, and see subclass 48 for combined packages of

- matches and cigarettes, subclass 83.5 for bales, and subclasses 139+ for a carrier, for potable beverage containers (e.g., cans, bottles, etc.), having means to space the containers in a desired arrangement, and additionally having hand or finger engaging means to pendulously support the containers. See also subclasses 303+ for a package for an annular article (e.g., tire, wire coil, etc.). (See “Packages, And Packaged And Banded Articles” above).
- 219, Electric Heating, subclasses 200+, 604, 633, and 767 for electric heaters which may be employed for heat sealing packages. (See “Packaging And Binding Subcombinations” above).
- 220, Receptacles, subclass 359.5 for a receptacle having a closure which is removed by breaking through soldered parts. (See “Packages, And Packaged And Banded Articles” above).
- 221, Article Dispensing, (see “Packaging And Binding Subcombinations” above).
- 221, Article Dispensing, appropriate subclasses for article dispensers (feeders) not otherwise provided for and see the class definition of Class 221 for a statement of the class lines and for the disposition of related disclosures of article and strip feeding processes and apparatus.
- 222, Dispensing, subclasses 92+, and see Note, above. (See “Packages, And Packaged And Banded Articles” above).
- 222, Dispensing, subclasses 92+ for collapsible wall type containers with dispensing means. (See “Packages, And Packaged And Banded Articles” above).
- 223, Apparel Apparatus, subclasses 37+ for garment folders. (See “Packaging And Binding Subcombinations” above).
- 223, Apparel Apparatus, subclass 1 for a method of and apparatus for mounting stockings on forms and subclass 54 for machines and machine processes for making dress shields. (See “A. Packaging And Binding Elsewhere Classified” above).
- 226, Advancing Material of Indeterminate Length, appropriate subclasses for methods of, and apparatus for, feeding material without utilizing the leading or trailing ends to effect movement of the material. (see “Packaging And Binding Subcombinations” above).
- 227, Elongated-Member-Driving Apparatus, appropriate subclasses for apparatus, of general utility, for driving a member into a workpiece which may be a cover. (See “A. Packaging And Binding Elsewhere Classified” above).
- 227, Elongated-Member-Driving Apparatus, for apparatus, of general utility, for applying a member, e.g., nail, to a receptacle or package. (see “Packaging And Binding Subcombinations” above).
- 229, Envelopes, Wrappers, and Paperboard Boxes, for articles of that type. (See “Packages, And Packaged And Banded Articles” above).
- 241, Solid Material Comminution or Disintegration, appropriate subclasses for crushers, per se, for material. The material may be in a cover such as a bag during the crushing. (See “Packaging And Binding Subcombinations” above).
- 271, Sheet Feeding or Delivering, appropriate subclasses, for the feeding of sheets such as cover sheets, insert sheets, etc. (See “Packaging And Binding Subcombinations” above).
- 283, Printed Matter, subclasses 21+, for labels and stamps. (See “Packaging And Binding Subcombinations” above).
- 289, Knots and Knot Tying, appropriate subclasses, for knot tying, and subclass 18.1 for a knot. (see “Packaging And Binding Subcombinations” above).
- 242, Winding, Tensioning, or Guiding, subclasses 430+ for winding elongated material about a core to form an article. (See “A. Packaging And Binding Elsewhere Classified” above).
- 264, Plastic and Nonmetallic Article Shaping or Treating: Processes, for processes wherein a cover material, i.e., primary encompassing or encasing material, is shaped from a material in a fluent or nonpreformed plastic state preliminarily to or simultaneously with a packaging operation. Where a laminating step, e.g., cut seaming, is included in any stage of the above indicated procedure, the process is provided for elsewhere; subclass 4, provides for processes for encapsulating normally liquid materials; subclasses 500+ for forming plastic sheets by a fluid pressure, e.g., vacuum, and subclasses 241+ for composite article making. (See “A. Packaging And Binding Elsewhere Classified” above).
- 264, Plastic and Nonmetallic Article Shaping or Treating: Processes, appropriate subclasses for processes within the class definition for (1) stretching and/or shrinking, per se, or combined with a significant molding or shaping step and (2) casting or molding. (See “Packaging And Binding Subcombinations” above).
- 269, Work Holders, appropriate subclasses. Class 269 is the residual locus for patents to a device for clamping, supporting and/or holding an

- article (or articles) in position to be operated on or treated. See notes thereunder for other related loci. (See “Packaging And Binding Subcombinations” above).
- 270, Sheet-Material Associating, subclasses 45+ for associating sheets and then folding, and subclass 55 for inserting an additional sheet into a folded sheet. (See “Other Covering” above).
- 294, Handling: Hand and Hoist-Line Implements, subclass 137 for hand-held package or article carriers. (See “Packages, And Packaged And Banded Articles” above).
- 312, Supports: Cabinet Structure, subclasses 35+ for supports of the cabinet type having article containing magazine structures including means for facilitating removal of the articles therefrom. (See “Packaging And Binding Subcombinations” above).
- 383, Flexible Bags, for bags made out of flexible or flaccid material. (See “Packages, And Packaged And Banded Articles” above).
- 412, Bookbinding: Process and Apparatus, appropriate subclasses for processes and apparatuses for manufacturing books. (See “Other Covering” above).
- 413, Sheet Metal Container Making, appropriate subclasses for the method and apparatus of manufacturing cans. (See “A. Packaging And Binding Elsewhere Classified” above).
- 424, Drug, Bio-Affecting and Body Treating Composition (see “Packages, And Packaged And Banded Articles” above).
- 424, Drug, Bio-Affecting and Body Treating Compositions, subclasses 14+, for a capsulated composition provided for therein. (See “Packages, And Packaged And Banded Articles” above).
- 425, Plastic Article or Earthenware Shaping or Treating: Apparatus, subclass 6 for means shaping a fluent material into a casing and means simultaneously encapsulating a normally liquid material therein; and subclass 524 for means for blow molding a workpiece and simultaneously filling that workpiece with the blowing agent, wherein the blowing agent is intended to remain a part of the product. Otherwise, Class 53 provides for means shaping or reshaping a plastic combined with means for making a package including cover material production. (See “A. Packaging And Binding Elsewhere Classified” above).
- 425, Plastic Article or Earthenware Shaping or Treating: Apparatus, appropriate subclasses for meat briquette making. (See “Packaging And Binding Subcombinations” above).
- 426, Food or Edible Material: Processes, Compositions, and Products, subclasses 106+, for packaged edible products. (See “Packages, And Packaged And Banded Articles” above).
- 426, Food or Edible Material: Processes, Compositions, and Products, subclasses 392+, for process of packaging food combined with a food working step. (See “A. Packaging And Binding Elsewhere Classified” above).
- 427, Coating Processes, appropriate subclasses, for processes of coating, per se, including processes of coating packages or containers. (See “A. Packaging And Binding Elsewhere Classified” above).
- 427, Coating Processes, appropriate subclasses for processes of coating, per se, including processes of coating packages. (See “Other Covering” above).
- 427, Coating Processes, appropriate subclasses for coating, per se. (See “Packaging And Binding Subcombinations” above).
- 428, Stock Material or Miscellaneous Articles, appropriate subclasses, for a stock material product in the form of a single or plural layer web or sheet or miscellaneous coated articles, especially subclass 576 for metallic stock so configured as to facilitate its melting or fusing, and subclass 583 for metallic stock having a discrete fastener or marginal fastening. (See “Packages, And Packaged And Banded Articles” above).
- 452, Butchering, subclasses 35+ for sausage stuffers and subclasses 46+ for sausage linkers. (See “A. Packaging And Binding Elsewhere Classified” above).
- 453, Coin Handling, subclasses 31 and 59 for coin handling devices including coin group forming means which devices may include packaging means. (See “A. Packaging And Binding Elsewhere Classified” above).
- 453, Coin Handling, subclasses 31, 59 and 61+ for coin handling devices including coin group forming means. (See “Packaging And Binding Subcombinations” above).
- 493, Manufacturing Container of Tube From Paper; or Other Manufacturing From a Sheet or Web, for cutting generally, particularly subclasses 879+ for scoring by cutting; and see subclass 355 for cutting combined with form-scoring;

- and subclasses 396+ for form-scoring generally of a sheet or web.
- 493, Manufacturing Container or Tube From Paper; or Other Manufacturing From a Sheet or Web, subclasses 51+ for making a container to be subsequently filled. (See “A. Packaging And Binding Elsewhere Classified” above).
- 493, Manufacturing Container or Tube From Paper; or Other Manufacturing From a Sheet or Web, for making a container of paper of for making a product form a sheet or web, generally; particularly subclasses 51+ for making a container, generally; subclasses 52+ for making a box; and subclasses 186+ for making a bag or envelope. Making a container combined with filling that container with a commodity is to be found in this class (53). Placing a cover on a container which is, by disclosure at least, filled with a commodity is considered to be packaging and is proper for this class (53). (See “Packaging And Binding Subcombinations” above).
- 588, Hazardous or Toxic Waste Destruction or Containment, this is the generic class for chemically destroying or permanently containing any form of hazardous or toxic waste. The containment methods include packaging, binding, an immobilization of hazardous or toxic waste for the sole intent of permanently containing the waste. (See “A. Packaging And Binding Elsewhere Classified” above).
- 604, Surgery, subclasses 403+ for containers which may have dispensing functions. (See “Packages, And Packaged And Banded Articles” above).

where applied to a package for this class, (see subclass 138.6), the process of and apparatus for applying a binding is not here classified. See “Packaging and Binding Elsewhere Classified” of the Class Definition for binding, per se.

CLOSURE

A species of cover in which a separate cover member completes the encasement or confinement of contents within a preformed receptacle when said member is assembled within, over or around the aperture of said receptacle.

CONTENTS

The goods or materials which are, or are to be, confined within the space defined by the cover of the package, An insert sheet or coupon, to be packaged with other goods is considered to be a part of a group contents. See “GROUP FORMING”. A package resulting from a first packaging operation may become the contents of a second packaging operation.

COVER

A member, made from sheet material stock which serves to confine the contents by either a complete encasement or a partial encasement, and which fully encircles or encompasses the contents in at least one direction. A band, closure, preformed container, carton or receptacle, though said members are not “made from sheet material”, are each considered covers for this class. A spindle or core which extends into or through a preformed aperture in the contents is considered to be a partial cover. See subclass 581. See “BAND”, “CLOSURE”, and “RECEPTACLE”.

COVER-ADJUNCT

Some accessory, device or abiding characteristic which is supplied to, or formed integral with, a cover to perform some function in addition to the mere enclosing of the contents. Such adjuncts include the addition to a cover of (1) a filament, strand, wire, stamp, label, handle, or display support, (2) a filler piece for the gap resulting between two or more folded flaps, (3) some auxiliary cover seam retaining device, including a staple, a clip, a sewn stitch, or a simultaneously integrally formed and set tab-and-slot retaining means, (4) a coating, printing, embossing or other marking, ornamenting or display feature, (5) some means to provide for opening the cover such as, e.g., a tear strip, (6) a cover attached reinforcement, article holder, or article

SECTION V - GLOSSARY

BAND

A species of cover in which the cover material completely encircles the contents in one direction only, such as girth, leaving the contents fully exposed on two sides or ends, and which is in frictional contact with the contents so as to be retained thereon. See “BINDING”.

BINDING

The embracing by means of a filament, strand or wire of either an accumulated bunch of articles, a series of coils, or a single encased package. It differs from banding in that no substantial area of the contents is covered, and the binder is usually tied, knotted, or twisted. Except

remover, or (7) a window or window opening, (8) a contents contacting sealing spot, disc or gasket, (9) a superimposed disc which is applied to a hood or cap so as to depress said disc and a portion of the hood or cap within the aperture of a receptacle, (10) a cam actuated sealing or gripping means on the closure for fastening said closure, or (11) a protection strip placed over the contents of a receptacle (e.g., matches) and inserted between the side of the receptacle and the contents. However, the operations of slitting or notching of cover blanks and flaps preparatory to the shaping of the cover, or the application of adhesive to the cover to aid in seam retaining are not considered cover-adjuncts for this class. Nor is the addition of a transitory characteristic to a cover for the purpose of aiding in the packaging, e.g., the addition of moisture to a wrapper, considered to be a cover-adjunct.

FEED

Feed or delivery, as distinct from infeed, is transfer, conveyance, movement or translation of assembly components to or from what is established as a work position; at which position further motion of the components with respect to each other - generally a straight line movement along the major axis of either or both components - is called infeed. Thus, for example, motion of a closure element from a hopper or magazine to a superimposed position over the aperture of a receptacle is referred to as feed or delivery while the final juxtapositioning of the closure and receptacles previously aligned and oriented is considered infeed.

FILLING

The step of placing a contents within a cover. It is not necessary that the contents occupy the entire space encased; i.e., the cover may be only partially filled by a filling operation.

GROUP FORMING

The accumulating or gathering of an associated collection of articles, of the same or of different characteristics, by means of a plurality of feeding operations, for placement as a contents in a single cover. An insert sheet or coupon to be packaged with other goods is considered to be an article of different characteristics from the goods. On the other hand, an inner cover, or a section of plural section cover is not considered to be a part of the contents of an outer cover. See "CONTENTS".

HEADER

The means to either (1) hold and position, (2) hold and secure, or (3) juxtaposition and secure a separate closure element during infeed.

INITIAL WRAP

The wrapping of a cover around a contents to form a package is invariably done in two stages, viz.: first, the shaping of the cover about a single end or surface of the contents, and second, a further shaping of the cover by bending or folding the previously unfolded portions thereof so that the latter portions are in contact with the contents end or surface opposite to the end or surface about which the cover was previously shaped. The intermediate state of the cover at the end of the first stage is referred to as the Initial Wrap. The initial wrapping operation begins with the contact between the first end or surface of the contents with the cover and proceeds in two ways, either by (a) an unidirectional relative movement (which is not necessarily continuous) between the folding instrumentalities and the cover material-contents unit or (b) by a first relative movement between the folding instrumentalities and the cover material-contents unit, and one or more succeeding relative movements therebetween, at least the first of which is in a direction different from the first movement, and which serves to complete the shaping of the cover along the first end or surface of the contents without bending or folding the remaining unfolded portions of the cover into contact with the opposite end or surface of the contents.

PACKAGE

A unit consisting of an assembled cover material and contents, where the contents is, or is to be, encased or encircled by the cover material. The cover need not be shaped around the contents, e.g., the unit resulting from the final positioning of a contents upon a cover blank or web, which is then handled as a unit through further packaging operations including an encasement or encirclement, is also termed a package.

RECEPTACLE

A stage of cover formation in which the cover material has been fashioned into such shape as to at least partially confine the contents, as for example, against lateral displacement. A sheet of bendable or foldable cover material which has received a single preliminary fold, such as a U-fold, as well as a completely formed carton, are both considered to be receptacles.

SEAM

Two or more edges of the cover material brought together with or without adhesion. Usually the seam is implemented by adhesion, folding or interfitting but a mere overlapping of two edges is sufficient to constitute a seam.

WRAPPER

A species of flexible cover material in which the initial wrap is bent or folded about the contents as the first step in the encasement of the contents to make a package.

SUBCLASSES

48.1 MULTIPLE BOTTLE OR CAN CARRIER TYPE PACKAGE:

This subclass is indented under the class definition. Apparatus for placing a cover, about a group of containers, e.g., bottles or cans, which cover, after being placed about the containers has (1) an accessible handle and (2) means to establish the spacial relationship of the containers relative to each other.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 49+, for apparatus for applying a cover to an individual bottle.
- 134, for apparatus for making a package having a handle, generally.
- 398, for a method of applying a partial cover over a plurality of bottles or cans.
- 594, for apparatus for forming a partial cover leaving a reduced projecting portion of the contents exposed.

SEE OR SEARCH CLASS:

- 220, Receptacles, subclasses 101 and 102+ for a carrier, e.g., to hold a bottle or the like, having a base depending from a handle or for a carrier to hold a plurality of said bottles, etc., on a base in a desired spacial relationship, regardless of the material from which the carrier is made.
- 493, Manufacturing Container or Tube From Paper; or Other Manufacturing From a Sheet or Web, for a process of or apparatus for making a paper cover or wrapper, generally; e.g., for making a wrapper blank with a tear strip to be

erected to the form of a multiple bottle or multiple can carrier.

48.2 Of shrinkable or memory material:

This subclass is indented under subclass 48.1. Apparatus adapted to supply a cover of material which, when thermally or chemically treated, will change size to establish the spacial relationship of the containers relative to each other.

48.3 Of stretchable material:

This subclass is indented under subclass 48.1. Apparatus adapted to supply a cover of material which, as it is placed about the containers, is stressed within its elastic limit so that the cover will change size when removed from the apparatus to establish the spacial relationship of the containers relative to each other.

48.4 Continuous web:

This subclass is indented under subclass 48.3. Apparatus particularly adapted to deliver packaging material which comprises an elongated sheet, wherein the sheet is of sufficient length that at least one of the leading and trailing ends thereof is not recognized (engaged) by the delivering apparatus.

48.5 Endless loop:

This subclass is indented under subclass 48.1. Apparatus wherein the cover is a band connected to itself.

48.6 Wrap:

This subclass is indented under subclass 48.1. Apparatus intended to place a cover having two ends about a group of containers such that the ends overlap.

48.7 Of moving bottles or cans:

This subclass is indented under subclass 48.6. Apparatus intended to place a cover about a group of containers as they translate through the apparatus.

48.8 Wrap of preformed blank:

This subclass is indented under subclass 48.6. Apparatus intended to receive stock material for the cover which is already cut to shape when it enters the apparatus.

48.9 Having means to interlock or tighten:

This subclass is indented under subclass 48.8. Apparatus intended to utilize a mechanical feature of the blank for latching the ends together or for drawing the wrap into closer engagement about the containers.

49 BOTTLE IN SHAPED COVER OR CARTON:

This subclass is indented under the class definition. Apparatus for applying cover material to bottles with accommodation of the cover material to a necked-down or progressively reduced portion of the bottle.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 48.1+, for apparatus for making packages for carrying a plurality of bottles.
- 287+, for means for applying separate closures to receptacles including hoods or cots for bottles.

SEE OR SEARCH CLASS:

- 156, Adhesive Bonding and Miscellaneous Chemical Manufacture, appropriate subclasses for apparatus for adhesively securing labels to bottles.

50 PACKAGE UNFOLDING OR OPENING WITH INSERTION OR ADDITIONAL CONTENTS:

This subclass is indented under the class definition. Apparatus for opening a previously filled package or receptacle by unfolding one or more folds of the cover or by forming or opening a preformed access in the cover, and placing further contents within the cover.

- (1) Note. The additional contents is usually a coupon or coins.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 186+, for apparatus for opening a collapsed preshaped receptacle and filling it.
- 266.1+, for apparatus for filling and closing preformed receptacles which include opening a flap, lid etc., for filling.
- 381.1+, for apparatus for opening a collapsed preshaped receptacle (e.g., bag, envelope) or for manipulating the flaps.

51 REGISTER CONTROL:

This subclass is indented under the class definition. Apparatus having means for insuring that prescribed areas of the cover are accurately centered with relation to either the contents or opposite edges of the package.

- (1) Note. The prescribed area of the cover may, for example, have indicia thereon.

SEE OR SEARCH CLASS:

- 83, Cutting, subclasses 72+ for self-regulating web cutting devices and subclasses 360+ for cutting devices whose operation is controlled by means responsive to work, e.g., photocell sensing of reference marks on web.
- 226, Advancing Material of Indeterminate Length, subclasses 15+ and 27+ for web registering devices.

52 WITH MEANS RESPONSIVE TO A SENSED CONDITION:

This subclass is indented under the class definition. Apparatus for sensing (1) and abnormal or undesired condition of the packaging apparatus, (2) a normal or desired condition or position of the package, or any component part thereof, (3) an abnormal or undesired condition or position of the package, or any component part thereof, or (4) the absence of the package or some component part thereof; and as a result of this sensing and without external intervention, having means to bring about an alteration in the operation or control of such apparatus, including the starting or stopping of the drive therefor or for some component part thereof, so as to correct, avoid damage from, or mitigate the effects of such condition, or to cause the normal operation or stopping of the apparatus or some part thereof.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 507, for sensing or triggering mechanisms which control alarms, signals, indicators and counters without bringing about any alteration in the operation of the apparatus.

SEE OR SEARCH CLASS:

- 118, Coating Apparatus, subclasses 663+ for contents controlled adherent applicators, per se.
- 131, Tobacco, subclasses 21+ for apparatus and processes relating to tobacco manufactures including means responsive to a condition to automatically control the apparatus or a part thereof.
- 141, Fluent Material Handling, With Receiver or Receiver Coating Means, subclasses 138+ and 156+ for material transfer cycles controlled by presence or absence of contents or receiver in material handling systems of the separable supply and receiver type.
- 192, Clutches and Power-Stop Control, subclasses 125+ for power stop control of packaging apparatus or subcombinations thereof wherein the apparatus or subcombination is broadly claimed, and see the Notes thereto for other types of automatic power stop control.
- 198, Conveyors: Power-Driven, appropriate subclasses for different types of conveyors or systems of plural conveyors having operation control means responsive to a condition of a conveyor or to a condition of the conveyed load.

53 Separate delivery of incomplete or defective package:

This subclass is indented under subclass 52. Apparatus having means which senses packages deficient in some respect, and which deflects the defective package from the normal delivery path without interrupting the packaging operation on other packages.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 54, for apparatus to cause separate delivery of defective contents.

SEE OR SEARCH CLASS:

- 209, Classifying, Separating, and Assorting Solids, appropriate subclasses, for methods of and apparatus for classifying,

ing, separating and/or assorting with separate discharging of sorted articles.

54 Separate delivery of incomplete or defective contents or contents group:

This subclass is indented under subclass 52. Apparatus which senses a contents, deficient in some respect, and which deflects the defective contents from the normal delivery path without interrupting the packaging operation on other contents.

- (1) Note. Such deficiency may be, for example, a deformed article or an incomplete group contents normally composed of two or more elements.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 53, for apparatus to cause separate delivery of defective packages.
- 147+, for apparatus for accumulating and/or associating a plurality of contents portions of a package.

SEE OR SEARCH CLASS:

- 209, Classifying, Separating, and Assorting Solids, appropriate subclasses for methods of and apparatus for classifying, separating and/or assorting solids.

55 Concurrent control of contents and receptacle feeds:

This subclass is indented under subclass 52. Apparatus wherein the control of both the supplying of contents and of covers or cover material is simultaneously or conjointly effected.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 64+, for apparatus for controlling the supply of the cover, or cover material without affecting the supply of the contents.
- 493, for apparatus for controlling the supply of the contents without affecting the supply of the cover or cover material.

SEE OR SEARCH CLASS:

- 235, Registers, subclass 132 for apparatus comprising a register and means for controlling the movement of articles and receptacles in a packaging line

upon a particular or predetermined register reading being obtained.

- 56 Stopped by contents, manual reset:**
This subclass is indented under subclass 55. Apparatus wherein the condition, presence or absence of a contents disables the supply of both the contents and cover or cover material to an extent requiring manual intervention to restart.

SEE OR SEARCH CLASS:

- 192, Clutches and Power-Stop Control, subclasses 125+ for power stop control of packaging machines or subcombinations thereof, wherein the machine or subcombination is broadly claimed, especially subclass 126 for sheet material control.

- 57 By absence of contents:**
This subclass is indented under subclass 56. Apparatus wherein the failure of the apparatus to present the contents disables the supply.

- 58 Triggered by presence of contents:**
This subclass is indented under subclass 55. Apparatus wherein the effected control is initiated by the mere presentation of the contents to the machine, or to some part thereof.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 74, for cover or cover material feed, or cover adjunct feed or application, triggered by presence of contents.
76, for end closing triggered by presence of the package.

- 64 Of receptacle or cover feed or adjunct feed or application:**
This subclass is indented under subclass 52. Apparatus in which the control effects (1) the cover or cover material supply to, or (2) the supply or addition of a cover adjunct to, the packaging apparatus.

- (1) Note. For the meaning of "cover adjunct" see Glossary of the class definition.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 55+, for apparatus for simultaneously or conjointly controlling the supply of both the contents and the cover.

SEE OR SEARCH CLASS:

- 192, Clutches and Power-Stop Control, subclasses 125+ for power stop control of packaging apparatus or subcombinations thereof wherein the apparatus or subcombination is broadly claimed, especially subclass 126 for sheet material control.
226, Advancing Material of Indeterminate Length, appropriate subclasses and note especially subclasses 10+ for feeding controlled by material-responsive means.

- 65 Of marker by defective package component:**
This subclass is indented under subclass 64. Apparatus wherein an abnormal package or package component initiates the operation of a device which brands or otherwise identifies the abnormal package or package component.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 131.2, for the application of printing to a cover or cover material.

- 66 Severed length determined by contents size:**
This subclass is indented under subclass 64. Apparatus in which the amount of cover material cut off for each contents unit is controlled by sensing at least one dimension of such unit.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 389.1+, for apparatus for feeding cover material, per se, which may include cutting a cover blank from a web.

SEE OR SEARCH CLASS:

- 83, Cutting, appropriate subclasses, especially subclasses 72+ and 360+ for cutting a web responsive to a condition sensing means.

67 Responsive to presence or absence of preformed receptacle:

This subclass is indented under subclass 64. Apparatus wherein the effected control is initiated by a sensing of the presence or absence of a preformed receptacle.

- (1) Note. See the Class Definition, Glossary for the meaning of the term "receptacle".

68 With closure ejection means:

This subclass is indented under subclass 67. Apparatus including means, effective upon the sensing of the presence or absence of a preformed receptacle, to remove a previously placed closure from assembly position.

69 During infeed:

This subclass is indented under subclass 67. Apparatus wherein the sensing is effected during a final assembly or juxtapositioning of the component elements.

70 With solenoid control means:

This subclass is indented under subclass 67. Apparatus wherein the sensing means actuates an electromagnetic control.

71 With intermediate clutch:

This subclass is indented under subclass 67. Apparatus wherein the sensing means serves to activate or deactivate a clutch governing the feed means.

72 And presence or absence of closure:

This subclass is indented under subclass 67. Apparatus wherein the effected control is responsive to a sensing of both the preformed receptacle and a closure.

73 Skip feed by absence of contents:

This subclass is indented under subclass 64. Apparatus in which the sensing of the absence of a contents to be packaged interrupts the feeding operation of the cover material for that package.

SEE OR SEARCH CLASS:

- 141, Fluent Material Handling, With Receiver or Receiver Coating Means, subclasses 139 and 153 for automatic control by contents of fill-

ing systems having means for presenting successive receivers to be filled.

- 198, Conveyors: Power-Driven, subclass 232 for devices for controlling the stopping of a conveyor by the presence or absence of an article thereon.

74 Triggered by presence of contents:

This subclass is indented under subclass 64. Apparatus wherein the effected control is initiated by the mere presentation of the contents to the machine, or to some part thereof.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 58, for concurrent control of contents and cover or cover material feeds triggered by presence of contents.
76, for end closing triggered by presence of the package.

75 Of package and filled receptacle closing or opening:

This subclass is indented under subclass 52. Apparatus wherein the control effects the encasement of the contents by closing the last open side of the cover or receptacle.

- (1) Note. Included here are devices wherein the control effects the opening of a package for purposes of further packaging (e.g., adding additional material to the contents).

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 285+, for apparatus for closing packages and filled receptacles.
381.1+, for a device which opens a package for further packaging.
476, for methods of closing packages and filled receptacles.

76 Triggered by presence of package:

This subclass is indented under subclass 75. Apparatus wherein the effected control is initiated by the mere presentation of a package to the machine or some part thereof.

- (1) Note. The juxtapositioning and securing of closure to a preformed container as virtually a single operation, triggered by the presence of the container, has been

placed in subclass 67 and no cross-reference to this subclass made.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 58, for concurrent control of contents and cover or cover material feeds triggered by presence of contents.
- 67, and see (1) Note.
- 74, for cover or cover material feed, or cover adjunct feed or application, triggered by presence of contents.

77 INTERRELATED OR SAFETY CONTROLS:

This subclass is indented under the class definition. Apparatus in which (1) two or more portions of the apparatus having distinct functions each have the regulating elements therefor so arranged as to require one element to assume a desired position simultaneously or in proper sequence with the position of another element, whereby the operation of one part is directly dependent upon the correct positioning of the regulating element of another part, or (2) some nonautomatic mechanism is so arranged as to prevent operation of part or all of the machine when such operation would (a) endanger the person of an operator or (b) injure some part of the machine.

SEE OR SEARCH CLASS:

- 100, Presses, subclasses 341 through 352 for a press not provided for elsewhere having a safety control system and subclass 353 for a press not provided for elsewhere having an interrelated control system.
- 141, Fluent Material Handling, With Receiver or Receiver Coating Means, subclass 97 for filling systems having a guard or screen for the operator; subclass 155 for safety-stops or interlocks of the safety type in filling systems having means for presenting successive receivers to be filled; subclass 346 for interlocks in other filling systems of a separable type.

79 GAS FILLING AND/OR EVACUATING OF RECEPTACLE AND CLOSING:

This subclass is indented under the class definition. Apparatus including means to charge and/or evacuate receptacles with gas or vapor

only combined with means to complete the receptacle enclosure.

- (1) Note. The Notes under subclasses 403, 405 and 408 must be referred to as most of said notes apply to this subclass with equal force.
- (2) Note. This subclass is restricted to gas or vapor handling in combination with closing. Any additional filling with and/or treatment of articles or fluent material require that the combination be classified in the appropriate subclasses below.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 266.1+, for apparatus to the combination of means for filling and closing a pre-formed receptacle; particularly, subclass 267 for gas or vapor handling in conjunction with filling and closing of a performed receptacle.
- 403+, for processes of charging receptacles with gas and/or evacuating receptacles and completing the enclosure.
- 432+, for the process of treating the contents of a package by application of vacuum or gas.
- 510+, for apparatus to treat the contents with a vacuum and/or an inert atmosphere.

SEE OR SEARCH CLASS:

- 141, Fluent Material Handling, With Receiver or Receiver Coating Means, subclasses 37+ for closed systems which handle diverse fluids, one usually a gas, in such a way as to modify the gaseous content of a receiver, and subclasses 65+ for evacuation apparatus including filling with gas.
- 312, Supports: Cabinet Structure, subclasses 31+ for miscellaneous containers combined with means to treat contained material or articles with a gas or vapor.

80 Including soldering means:

This subclass is indented under subclass 79. Apparatus including means to apply and/or fuse a heat sensitive bonding agent to seal or secure the closure of a receptacle.

- (1) Note. See (2) Note under subclass 404 for the scope of the term “solder”, as here used.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

404, for equivalent processes.

SEE OR SEARCH CLASS:

219, Electric Heating, appropriate subclasses for solder fusing means including electric heating.

228, Metal Fusion Bonding, appropriate subclasses for bonding of a cover on a container by soldering, brazing or welding without filling of the container.

81 Solder and/or flux deposit only:

This subclass is indented under subclass 80. Apparatus limited to the application or juxtapositioning of solder and/or flux.

SEE OR SEARCH CLASS:

228, Metal Fusion Bonding, subclass 14 and 33 +for apparatus for applying flux or solder in a metal-fusion bonding operation.

82 Iron application only:

This subclass is indented under subclass 80. Apparatus limited to the means for juxtapositioning the heated members or heating members required for fusion of the solder material.

SEE OR SEARCH CLASS:

228, Metal Fusion Bonding, subclasses 25+ and 45 for means to move or guide the heated member in a metal fusion bonding operation.

83 Electric arc or resistance type:

This subclass is indented under subclass 82. Apparatus wherein the members required to provide fusion heat are either electrodes which strike an arc or electrodes that complete a circuit including the solder material, which material is heated by the flow of current therethrough.

SEE OR SEARCH CLASS:

219, Electric Heating, appropriate subclasses for resistance type soldering electrode means.

84 Pressure responsive and/or regulation:

This subclass is indented under subclass 79. Apparatus including means to initiate the receptacle closing mechanism actuated by pressure sensitive means.

- (1) Note. The actuating means is responsive to the gas filling pressure or degree of evacuation in the receptacle.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

269, for closing mechanism tripped by vented air.

SEE OR SEARCH CLASS:

141, Fluent Material Handling, With Receiver or Receiver Coating Means, subclasses 39+ for automatic control of diverse fluid handling systems in response to gas condition in a separable receiver.

85 Enclosure responsive:

This subclass is indented under subclass 79. Apparatus wherein the completion of a chamber or bell about the receptacle initiates the filling and closing cycle of the mechanism.

86 Within enclosure:

This subclass is indented under subclass 79. Apparatus including a bell, chamber or vault into which the receptacle is placed during the filling and/or evacuating and closing.

- (1) Note. Except for valved inlets and outlets, the closed bell, chamber or vault is isolated from the atmosphere.

SEE OR SEARCH CLASS:

141, Fluent Material Handling, With Receiver or Receiver Coating Means, subclass 51 for diverse fluid handling systems having gas condition control in the housing for a separable receiver.

87 With screen or graduated orifices:

This subclass is indented under subclass 86. Apparatus including either (1) a sieve-like device to retain contents entrained in the gas or gases being removed from the enclosure or (2) a series of varying sized openings through which a vacuum is gradually applied to the receptacle.

88 For receptacle head only:

This subclass is indented under subclass 86. Apparatus in which the enclosure is restricted to either (1) the aperture of the receptacle or (2) the aperture and the adjacent portion of the receptacle the rest of the receptacle not being enclosed.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

268+, for similarly restricted enclosure means in conjunction with filling (other than or in addition to gas) and closing of receptacles.

SEE OR SEARCH CLASS:

141, Fluent Material Handling, With Receiver or Receiver Coating Means, subclass 287 for devices including a gas expanding seal means between a vented filling head and a separable receiver.

89 Machine positioned receptacle and/or closure:

This subclass is indented under subclass 86. Apparatus including means to feed or convey receptacles and/or closures into, through and/or out of the filling and closing chamber.

(1) Note. Mere infeed (see definition of terms) at a given work station into or out of the bottom of a chamber is not here considered to be positioning for this subclass and such handling is to be found throughout the subclasses indented under subclass 86.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

268, for devices which position receptacles and/or closures with respect to a common fill-close station.

276, for devices which position receptacles and/or closures with respect to separate fill-close stations.

299, through 310, for positioning means in conjunction with devices for applying separate closures.

90 Through lock or valve means:

This subclass is indented under subclass 89. Apparatus including means to pass receptacles and/or closures into or out of a chamber without directly exposing the interior of said chamber to the atmosphere.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

274, for filling and closing devices including closure port valve means.

SEE OR SEARCH CLASS:

414, Material or Article Handling, subclasses 217+ for apparatus for moving material between zones having different pressures and inhibiting a change in the pressure gradient existing therebetween.

91 Rotary pocket or pockets:

This subclass is indented under subclass 90. Apparatus wherein the receptacle is seated in a concavity constrained to move about an axis and alternately open to either the chamber or the atmosphere at any one time but not to both simultaneously.

92 Common in-out:

This subclass is indented under subclass 91. Apparatus wherein a group of radially arranged concavities serve both as ingress and exit means for the chamber.

93 With separate coacting pockets:

This subclass is indented under subclass 92. Apparatus wherein a common in-out valve cooperates with two or more pocketed rotary members to effect the in-out sealing means.

94 Including closure handling means:

This subclass is indented under subclass 90. Apparatus wherein a lock or valve is provided with additional means to pass a separate closure member into the chamber.

- 95 Multiple individual receptacle chambers:**
This subclass is indented under subclass 89. Apparatus wherein each receptacle is fed or moved into a separate chamber.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
272, and 276, for plural filling and closing heads rotatively indexing and progressively acting.
- 96 Integral unit:**
This subclass is indented under subclass 95. Apparatus wherein the individual receptacle chambers constitute a unitary member.
- 97 With closure assembling means:**
This subclass is indented under subclass 86. Apparatus including means to juxtapose and/or secure a closure member and receptacle.
- (1) Note. Except for representative patents no effort was made to cross reference into this subclass (97) the many disclosures of conventional assembling means utilized within an enclosure in which the assembling means and enclosure means do not coact in an unusual or a more than additive manner.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
287+, for separate closure applying, per se.
- 98 Resilient hold-down:**
This subclass is indented under subclass 97. Apparatus wherein a closure member is urged into sealing position on a receptacle by a yieldable means only.
- (1) Note. The yielding means is usually for the purpose of retaining a closure in approximate sealing position while permitting the escape of gas or gases during evacuation of the receptacle, the resulting pressure differential then serving to hold the closure in place.
- 99 Gravity plunger or platen:**
This subclass is indented under subclass 97. Apparatus wherein a weight acts on a closure member to urge said member into sealing position.
- 100 With drop control:**
This subclass is indented under subclass 99. Apparatus including means to initiate the action of the gravity means.
- 101 Mechanically actuated plunger or platen:**
This subclass is indented under subclass 97. Apparatus including mechanism to place a closure member in sealing position.
- (1) Note. The mechanism, here classified, requires machine means to effect infeed between the closure and receptacle. See definitions of terms for “infeed”.
- (2) Note. Sealing position is taken to be the assembled or packaged position of the closure which may or may not then be secured to maintain said position.
- 102 With equalizer means:**
This subclass is indented under subclass 101. Apparatus including means to provide for uniform pressure on a plurality of closure members.
- 103 Atmospheric pressure:**
This subclass is indented under subclass 97. Apparatus wherein the application of atmospheric pressure is the means serving to hold or retain a closure in sealing position.
- 104 With fluid system intensifier:**
This subclass is indented under subclass 103. Apparatus including means to augment or increase the effective force of atmospheric pressure on a closure member.
- 105 Flexible diaphragm:**
This subclass is indented under subclass 103. Apparatus wherein the atmospheric pressure is exerted or applied through a yieldable batt or membrane.
- 106 Pressure platen:**
This subclass is indented under subclass 103. Apparatus wherein the atmospheric pressure is applied or exerted against a rigid force transmitting member, the movement of which member serves to position the closure for sealing.

107 Individual receptacle:

This subclass is indented under subclass 106. Apparatus wherein a separate force transmitting member acts to position each closure.

108 Base contacting:

This subclass is indented under subclass 107. Apparatus wherein the force transmitting member acts against the bottom of a receptacle.

109 With cap lifter:

This subclass is indented under subclass 86. Apparatus including means to raise the closure.

- (1) Note. The closure is raised to facilitate the passage of gas in or out of the receptacle prior to sealing.

SEE OR SEARCH THIS CLASS, SUBCLASS:

343, for closure applying means including magnetic closure holding means.

110 Within tunnel:

This subclass is indented under subclass 79. Apparatus wherein the closing and charging and/or evacuating means are applied to a receptacle while said receptacle, or the aperture portion thereof, is partially enveloped by a hood or channel.

- (1) Note. The hood or channel serve to provide a measure of control over the nature of the gaseous atmosphere about the aperture portion of the receptacle.

111 WITH CONTENTS TREATING:

This subclass is indented under the class definition. Apparatus combined with means for subjecting the contents material, either before, after or during packaging, to an agency which alters a physical or chemical characteristic of the contents material or which prevents a constituent of the ambient atmosphere, or another ambient condition from altering a physical or chemical characteristic of the contents material.

- (1) Note. Other main classes appropriate to the type of treatment must be searched in addition to those listed hereunder as search classes.

- (2) Note. Mere change of position of separate contents parts relative to one another, as by accumulating separate contents units into a group, or flowing fluent material into a receptacle, such as a contents charge holding chamber, is not regarded as treating the contents to change a physical property. Group forming of contents units combined with subsequent or further packaging is included in this class (53) in subclasses 147+. Apparatus having a contents charge holding chamber is not set out separately in this class (53), but may appear in any subclass.

- (3) Note. This subclass includes apparatus having means to emboss a design or lettering upon the contents. See subclasses 113+ indented hereunder for apparatus having means to reshape the contents particularly subclass 122 for molding or plastic deformation.

SEE OR SEARCH THIS CLASS, SUBCLASS:

113+, see (3) Note above.

122, see (3) Note above.

131.2+, for apparatus for package making including means for printing to form an adjunct on a cover.

135.1+, for apparatus for package making including means to apply a nonencircling strip, e.g., a stamp, label or gap filler.

147+, see (2) Note above.

428, for corresponding methods.

525, see (2) Note above.

SEE OR SEARCH CLASS:

99, Foods and Beverages: Apparatus, subclasses 352+ for apparatus to make an edible composite (e.g., pie, etc.) combined with cooking means.

131, Tobacco, subclasses 282 and 283 for tobacco products manufacture combined with packaging.

141, Fluent Material Handling, With Receiver or Receiver Coacting Means, subclass 69 for filling receivers with fluent material including treating the contents when the treatment is of the "nonmanufacturing"

- type. Any treatment which, per se, would be included in any of the manufacturing classes has not been considered mere material handling for Class 141 and will be found in this and indented subclasses in Class 53.
- 144, Woodworking, subclasses 50+ for combined apparatus for or method of making and packaging matches.
- 221, Article Dispensing, subclasses 135+ for article dispensing apparatus having means to treat the articles dispensed.
- 222, Dispensing, subclass 190 for fluent material dispensing apparatus having miscellaneous means to treat the material dispersed, and see the search notes to that subclass for other material treating combinations in the class.
- 425, Plastic Article or Earthenware Shaping or Treating: Apparatus, subclass 112 for mold means to form a composite article from a preform and plastic material and means to reshape the preform.
- 113 Reshaping:**
This subclass is indented under subclass 111. Apparatus in which the contents material as a result of the agency action undergoes a change in size, configuration or proportion.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
111, for packaging apparatus combined with means for embossing a design or lettering upon the contents.
147, for apparatus for reorienting a plurality of contents portions to change the shape of the groups contents without changing the shape of the individual contents portions.
- SEE OR SEARCH CLASS:
100, Presses, subclasses 31+ especially subclass 31 for means to coil wire, strands or hose combined with banding and/or binding mechanisms.
- 114 Coil spring encasing:**
This subclass is indented under subclass 113. Apparatus for enclosing helical springs within a cover.
- (1) Note. This subclass includes apparatus for turning an already encased coil spring within its cover.
- 115 Cushioning material inserting means (e.g., pill bottle cotton):**
This subclass is indented under subclass 113. Apparatus for positioning over the contents of receptacle a material to occupy substantially the remainder of the receptacle to prevent movement of the contents.
- (1) Note. This subclass includes inserting cotton into a bottle of pills and conforming the cotton to the shape of the bottle.
- 116 Folding or rolling:**
This subclass is indented under subclass 113. Apparatus in which flexible contents undergoes a doubling or winding operation.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
429, for methods of folding.
430, for methods of winding.
- 117 Sheet material or garments:**
This subclass is indented under subclass 116. Apparatus wherein the contents is thin relative to its length and breadth.
- (1) Note. Flat garments are regarded as sheet material for this subclass.
- SEE OR SEARCH CLASS:
223, Apparel Apparatus, subclass 37, for garment folders.
493, Manufacturing Container or Tube From Paper; or Other Manufacturing From a Sheet or Web, subclasses 405+ for folding, per se, of a sheet or web.
- 118 Rotary winding:**
This subclass is indented under subclass 117. Apparatus in which the contents material is coiled upon itself by rotation of the entire contents.
- (1) Note. Opposite margins of the contents material must be brought at least to overlapping relation for the operation to be

considered winding or coiling for this subclass.

SEE OR SEARCH CLASS:

242, Winding, Tensioning, or Guiding, subclasses 520+, particularly subclass 528 for convolutely winding material to form a storage coil.

119 Slotted or divided mandrel:

This subclass is indented under subclass 118. Apparatus in which the winding or coiling is around a core which is gapped to receive the edge of the sheet material.

120 Slot and blade doubling:

This subclass is indented under subclass 117. Apparatus in which the contents is folded upon itself by forcing the material between spaced abutments by means of a thin edge travelling between the abutments.

121 Crushing:

This subclass is indented under subclass 113. Apparatus in which the contents material is subjected to mechanical forces which cause indiscriminate breakage of larger masses of the material into smaller masses.

SEE OR SEARCH CLASS:

241, Solid Material Comminution or Disintegration, appropriate subclasses for crushers, per se, for material. The material may be in a cover such as a bag during the crushing. See especially subclass 100 for crushers with independent removable or detachable material receiver or receiver engaging means.

122 Molding or plastic deformation:

This subclass is indented under subclass 113. Apparatus in which the material is subjected to a pressure and/or temperature which will cause the material to flow until it assumes the form of a confining structure.

- (1) Note. The confining structure is frequently a container but may be the nozzle of a die expressing press.

SEE OR SEARCH THIS CLASS, SUBCLASS:

111+, for packaging apparatus combined with means for embossing a design or lettering upon the contents.

SEE OR SEARCH CLASS:

141, Fluent Material Handling, With Receiver or Receiver Coating Means, appropriate subclasses, for filling systems in which plastic material is extruded into a preformed receiver by a discharge assistant which may or may not have the same outlet area and shape as the receiver.

127 Heating or cooling:

This subclass is indented under subclass 111. Apparatus in which the material is subjected to a treatment which either raises or lowers the temperature of the contents material.

SEE OR SEARCH THIS CLASS, SUBCLASS:

373.7, for apparatus for heating or cooling an out turned seam of the cover material, and see the notes thereto for other heating or cooling of the cover material.
440, for corresponding methods.

SEE OR SEARCH CLASS:

62, Refrigeration, appropriate subclasses for refrigeration processes and apparatus, particularly subclass 60 for methods involving specific refrigerating steps combined with packaging, subclass 322 for disparate treating apparatus serially arranged with refrigeration means, subclass 331 for a refrigerator combined with other structure, and subclasses 340+ for refrigeration means producing a shaped product.
99, Foods and Beverages: Apparatus, subclasses 359+, for apparatus for heat treating food packages in containers.
118, Coating Apparatus, subclasses 58+ for apparatus for combined coating and heat treatment of work.

- 141, Fluent Material Handling, With Receiver or Receiver Coating Means, subclass 82 for apparatus for filling receivers with fluent materials including means to heat or cool the contents, and see the search notes thereto for other material handling means with heating or cooling.

128.1 WITH COVER-ADJUNCT APPLICATION OR FORMATION:

This subclass is indented under the class definition. Apparatus which performs an operation with respect to the cover* to supply thereto some accessory, device or abiding characteristic in addition to or beyond the mere enclosure of the contents.

- (1) Note. See Glossary, of the class definition, for the meaning of the terms "cover" and "cover-adjunct". An asterisk (*) is used in these subclasses to designate terms that are so defined.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 141, for packaging apparatus combined with means to condition the cover material effective during the packaging operation.
208, for apparatus to wrap packages combined with means to notch or slit the cover blank.
410+, for a process of package making including application of an adjunct to a cover member.

SEE OR SEARCH CLASS:

- 227, Elongated-Member-Driving Apparatus, for apparatus for driving a member, e.g., a nail or a staple.
229, Envelopes, Wrappers, and Paperboard Boxes, especially subclasses 124+ for a paperboard box with a closure for access opening, subclasses 48+ for a box including a seam, and subclasses 76+ for an envelope having a closure.
493, Manufacturing Container or Tube From Paper; or Other Manufacturing From a Sheet or Web, especially subclass 89 for apparatus to fold a box blank into shape and to apply metal stays thereto.

129.1 Adjunct comprising packing disk, sealing gasket, or "spot" applied to a closure:

This subclass is indented under subclass 128.1. Apparatus wherein the package made includes a first portion that contains most of the packaged material and a second portion that serves to complete the containment; i.e., a closure*, which apparatus includes means to supply a contents contacting protective element, as for example, a foil, a disc, etc., to the closure* with substantially simultaneous assembling of the first and second portion to close the package.

130.1 Adjunct comprising closure retainer seated into and depressed with portion of bottle hood:

This subclass is indented under subclass 128.1. Apparatus for use with a container comprising a rigid vessel having a neck with an opening at its extent to receive a cap, which container is packaged by a hood, i.e., a cap and neck covering member, which apparatus includes means to insert a cap securing member, usually a disc, into the hood so as to depress said member and a portion of said hood to exert pressure on the cap.

131.1 Adjunct comprising protective coating:

This subclass is indented under subclass 128.1. Apparatus which includes means to supply a fluid film or impregnant on a surface of the cover material or a part thereof during some portion of the operation of forming a package, which supplied film or impregnant serves to prevent damage to the cover material or to the contents of the package.

- (1) Note. Exception is made in the case of application of bonding material such as an adhesive or solvent in that this material is not regarded as producing an adjunct to the cover in view of the common practice to so seal the seams of a cover.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 141, for a package making apparatus with means to subject the cover to an operation which causes some transient change in a chemical or physical property thereof prior to its fabrication into a package.

- 170+, for apparatus for applying a plurality of covers formed from sheet material to a package.
- 411, for a method of packaging including application of a protective coating.

SEE OR SEARCH CLASS:

- 118, Coating Apparatus, for apparatus for coating a web, a cover blank or a completed package, generally.
- 131, Tobacco, subclass 284 for cigar or cigarette making combined with coating.

131.2 By printing:

This subclass is indented under subclass 128.1. Apparatus which includes means to supply recognizable indicia or a design on a surface of the cover or cover adjunct by impression of a type or die or by applying coating material thereto through openings of pervious portions of a pattern sheet, as in stenciling.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 65, for a packaging making apparatus wherein an abnormal or defective package or package component, or a printed mark, initiates the operation of a device which bands or otherwise identifies the abnormal package or package component.
- 111+, for package making apparatus with contents treating, such as printing on contents. See (3) Note under that subclass definition.
- 411, for a method of packaging including printing on the cover or an adjunct.

SEE OR SEARCH CLASS:

- 101, Printing, for printing apparatus, per se, especially subclasses 35+ for apparatus to imprint on a special article.
- 131, Tobacco, subclass 284 for cigar or cigarette making combined with printing.
- 156, Adhesive Bonding and Miscellaneous Chemical Manufacture, subclasses 384+ for laminating apparatus combined with printing means.

- 493, Manufacturing Container or Tube From Paper; or Other Manufacturing From a Sheet or Web, subclasses 187+ for bag or envelope making apparatus having a printing attachment.

131.3 On cover having separate closure or on such a separate closure:

This subclass is indented under subclass 131.2. Apparatus wherein the package made includes a first portion that contains most of the packaged material and a second portion that serves to complete the containment, wherein the recognizable indicia or design is supplied to either the first or the second portion.

131.4 Before or during packaging:

This subclass is indented under subclass 131.2. Apparatus wherein the recognizable indicia or design is supplied to the cover prior to formation of a package, or simultaneously therewith.

131.5 On continuous web:

This subclass is indented under subclass 131.4. Apparatus wherein the cover to which the recognizable indicia or design is supplied is in the form of a flat strip having no more than one utilized end at the time of application.

- (1) Note. A coil of web material is considered to be a continuous web.

132.1 Adjunct comprising lever actuated to constrict passage of contents into package:

This subclass is indented under subclass 128.1. Apparatus wherein the supplied accessory serves to throttle flow or movement of material into or out of the package and includes a pivotally swinging protuberance manipulated to effect such throttling.

- (1) Note. Included here are devices which assemble the closure onto the receptacle and then operate the lever as well as devices which merely operate the lever.

133.1 Adjunct comprising provision to allow access to contents, e.g., spout, straw, drain, opening, etc.:

This subclass is indented under subclass 128.1. Apparatus for supplying structure associated with the cover material to permit input or removal of a part or all of the contents.

- (1) Note. A cap on a container is part of the container, therefore is not an adjunct. However, an addition to a cap, e.g., a string on the cap to facilitate removal of the cap, is such an adjunct.

133.2 Fitment to dispense flowable contents, e.g., spout:

This subclass is indented under subclass 133.1. Apparatus wherein the contents access comprises a structure distinct from the package, but attached thereto.

- (1) Note. Attachment may be permanent, as by fusion so that the fitment may become integral with the package.
- (2) Note. A cap is part of the cover, therefore a cap is not considered to be a fitment.

133.3 Adjunct comprising provision to open package:

This subclass is indented under subclass 133.1. Apparatus for forming on, applying to, or otherwise making provision for some structure associated with the cover material which will modify at least a portion of the cover to expose a part or all of the contents.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 133.1, for packaging of flowable contents in an openable package, generally.
- 412, for a method of package making including forming or applying a cover adjunct comprising a package opening device.

SEE OR SEARCH CLASS:

- 220, Receptacles, subclasses 265+ for devices to open metallic receptacles by breaking through or ripping the soldered parts.
- 229, Envelopes, Wrappers, and Paperboard Boxes, subclasses 200+ for a paperboard box having severing means.
- 413, Sheet Metal Container Making, subclass 15 for the method of forming a frangible area in a can lid.

- 493, Manufacturing Container or Tube From Paper; or Other Manufacturing From a Sheet or Web, subclasses 212+ for making a pliable container including applying a tear strip thereto.

133.4 Reclosable:

This subclass is indented under subclass 133.3. Apparatus wherein the supplied access is intended to be opened and closed, repeatedly.

133.5 Tear string or tape under cover:

This subclass is indented under subclass 133.3. Apparatus including means to install a round or flat strand under a package cover which is intended to be pulled at one end to rip the package to yield access to the contents.

133.6 Cover weakened for tearing:

This subclass is indented under subclass 133.5. Apparatus wherein the supplied access comprises a portion of the cover* having less strength than other portions thereof, so that upon application of sufficient force the cover will rend such that the contents can be removed or added.

133.7 With graspable tab on cover or adjunct:

This subclass is indented under subclass 133.5. Apparatus wherein said cover or adjunct has a member to be engaged by the hand of a user to assist in application of force to rend the cover.

- (1) Note. Parallel notches in the cover may provide a graspable tab for this subclass.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 133.3, for a graspable tab without a tear string.

133.8 Cover weakened for tearing, e.g., having integral tear strip:

This subclass is indented under subclass 133.3. Apparatus wherein the supplied access comprises a portion of the cover* having less strength than other portions thereof, so that upon application of sufficient force the cover will rend such that the contents can be removed or added.

134.1 Adjunct comprising graspable appendage, e.g., handle:

This subclass is indented under subclass 128.1. Apparatus for supplying to the cover some extension particularly adapted to be gripped by the hand of a user.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 48, for apparatus for making a package for carrying a plurality of bottles or cans.
- 176, for apparatus for making a package by applying plural layer covers, where one of the layers is a band.
- 413, for a method of package making including formation or application of a handle.
- 582, for apparatus for making a package by applying a band or tube contents.
- 594, for apparatus to apply a cover to contents which have an extending, reduced handle portion.

SEE OR SEARCH CLASS:

- 16, Miscellaneous Hardware, subclasses 110.1+ for a handle, per se, and see the search notes thereto.
- 493, Manufacturing Container or Tube From Paper; or Other Manufacturing From a Sheet or Web, subclass 88 for making a rigid container from a sheet or web, combined with assembling a handle therewith, and subclass 226 for making a pliable container from a sheet or web, combined with assembling a handle therewith.

134.2 For permeable package, e.g., tea bag:

This subclass is indented under subclass 134.1. Apparatus wherein the package comprises a cover through which liquid is intended to pass to allow access of the liquid to the contents of the package and wherein the appendage comprises a strand attached to the cover to assist in removal of the package from such liquid.

135.1 Adjunct comprising nonencircling strip, e.g., stamp, label or gap filler:

This subclass is indented under subclass 128.1. Apparatus for supplying an area of sheet material of less extent than a complete encirclement of the package to a surface of the cover mate-

rial, or for supplying a sheet of material to the cover so as to fill the space resulting from failure of the edges of opposite flaps to abut or overlap each other.

- (1) Note. The sheet material of this definition may be or may not be preprinted.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 111+, for package making apparatus with contents treating, such as applying a label to contents. See (3) Note under that subclass definition.
- 131.2+, for packaging apparatus including means for imprinting directly on the cover or on a cover adjunct.

SEE OR SEARCH CLASS:

- 156, Adhesive Bonding and Miscellaneous Chemical Manufacture, subclasses 349+ for surface bonding apparatus, generally.

135.2 Applied to cover material before packaging:

This subclass is indented under subclass 135.1. Apparatus wherein the strip is supplied to the cover* prior to formation of the package.

135.3 Applied to continuous web material:

This subclass is indented under subclass 135.2. Apparatus wherein the strip is supplied to cover material having no more than one utilized end at the time when the strip is supplied thereto.

- (1) Note. A coil of web material is considered to be "continuous".

136.1 Applied to package:

This subclass is indented under subclass 135.1. Apparatus wherein the package has been made at the time when the strip is supplied thereto.

136.2 Applied to end of roll:

This subclass is indented under subclass 136.1. Apparatus wherein the package made is cylindrical and wherein the strip is attached to a face normal to the axis of the package.

136.3 To seal package:

This subclass is indented under subclass 136.1. Apparatus wherein the strip is intended to function to prevent contents from escaping or to

keep contaminating material from entering the package or hold portions of the cover in closed position.

- (1) Note. An envelope is included as a package in this subclass. An envelope is not considered to be three dimensional.

136.4 **Box:**

This subclass is indented under subclass 136.3. Apparatus wherein the cover is three dimensional and is rigid, i.e., is intended to generally retain its shape during use.

- (1) Note. Means to apply an adjunct to a glass jar is not included herein.

136.5 **Bag:**

This subclass is indented under subclass 136.3. Apparatus wherein the cover is three dimensional and is flaccid, i.e., is intended to not retain its shape during use.

137.1 **Adjunct comprising bottle hood securing means:**

This subclass is indented under subclass 128.1. Apparatus for use with a container comprising a rigid vessel having a neck with an opening at its extent to receive a cap, which container is packaged by a hood, i.e., a cap and neck covering member, which apparatus includes means to supply structure to hold the hood in position on the vessel.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 130.1, for package making including supplying an adjunct comprising a closure retainer seated into and depressed with a portion of bottle hood.

137.2 **Adjunct comprising package encircling sealing strip:**

This subclass is indented under subclass 128.1. Apparatus for applying a strip of less width than the cover, but completely encircling the package to secure or render airtight separate parts of the cover.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 419, for a method of package making including formation of a cover adjunct comprising an encircling sealing strip.

- 580, for devices for applying cover material and leaving a portion of the contents exposed and see the notes thereto for the locus of other patents relating to partial cover application.

138.1 **Adjunct comprising provision to secure cover:**

This subclass is indented under subclass 128.1. Apparatus wherein an accessory is supplied to hold the cover* in position about the contents of the package.

- (1) Note. A metallic ring or wire band contracted or crimped onto the closure member is considered to be a binding element and the application of such ring or band is to be found in this and the indented subclasses.
- (2) Note. Included in this subclass are devices for applying an elastic band to secure a hood or cap onto a bottle.
- (3) Note. For binding which is elsewhere classified, see "Packaging and Binding Elsewhere Classified" of the class definition and the search notes associated therewith. For the meaning of binding, see class definition Glossary.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 136.3+, for means to apply a label to a package to secure the cover.
- 176, for package making apparatus including means to apply plural layer covers, where one of the layers is a string, a wire, or a band.
- 416, for a method of package making including forming a cover adjunct including fastening or sealing.
- 582, for apparatus to merely apply a band or tube over the contents.

SEE OR SEARCH CLASS:

- 24, Buckles, Buttons, Clasps, etc., subclass 16 for bale or package ties.
- 56, Harvesters, subclasses 342+ for combined compressing and binding, and see (1) Note above.
- 72, Metal Deforming, subclasses 409.01+ for disclosure of a plier type tool usable in applying a wire band.

- 99, Foods and Beverages: Apparatus, subclass 350 for cooking apparatus in which a food support encircles the article and compresses the food therein, solely by said encirclement and not by end closures or the like.
- 100, Presses, subclasses 1+ for binding material in a flexible filament, strand or band.
- 131, Tobacco, subclass 15 for wrappers or binders for tobacco products.
- 289, Knots and Knot Tying, appropriate subclasses for knot tying.

138.2 Staple or clip:

This subclass is indented under subclass 138.1. Apparatus wherein the accessory comprises a bifurcated member intended to (1) pierce cover material or other material with generally parallel bifurcations or (2) grip cover material between generally parallel bifurcations and thereby secure closure of the cover.

- (1) Note. Apparatus to apply a staple or a clip to secure two portions of a cover is included herein.

SEE OR SEARCH CLASS:

- 227, Elongated-Member-Driving Apparatus, appropriate subclasses for driving a member, e.g., a staple into work.

138.3 Bag closing:

This subclass is indented under subclass 138.2. Apparatus wherein the cover secured is three dimensional, i.e., has a bottom and side walls but is open at the top, and is intended to not retain its shape during use, which apparatus applies the bifurcated member to secure to top of the cover closed.

- (1) Note. An envelope is not considered to be "three dimensional" and therefore an apparatus for closing an envelope with a staple or a clip is not considered proper for this subclass.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 417, for a method of package making including applying a fastener to a gathered bag neck.

138.4 Deformed staple or clip:

This subclass is indented under subclass 138.3. Apparatus including means to stress the securing means beyond its elastic limit to grip the cover material between generally parallel bifurcations and thereby secure closure of the cover.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 417, for a method of package making including applying a fastener to a gathered bag neck.

SEE OR SEARCH CLASS:

- 29, Metal Working, subclass 243.56 for a clip applier to assemble a clip over the edge of a member and subclass 243.57 for means to assemble a clip over the edge of a member to bind two elements or a cover to a base.

138.5 Adjunct comprising sewn seam:

This subclass is indented under subclass 138.1. Apparatus comprising means to stitch the cover.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 418, for package making including formation of a cover adjunct and fastening by sewing.

SEE OR SEARCH CLASS:

- 112, Sewing, subclass 110 for apparatus to sew bags and subclass 11 for devices to sew filled sacks.

138.6 Tie string or wire:

This subclass is indented under subclass 138.1. Apparatus wherein the accessory applied comprises a strand, generally round in cross-section, made of nonmetal or of metal which serves to hold the cover in position about the contents of the package.

138.7 Bag closing:

This subclass is indented under subclass 138.6. Apparatus wherein the cover secured is three dimensional, i.e., has a bottom and side walls but is open at the top, and is intended to not retain its shape during use, which apparatus

applies a member to secure the top of the cover closed.

application of a protective media (e.g., shock absorbing).

138.8 Twisting of string or wire:

This subclass is indented under subclass 138.7. Apparatus wherein securement of the strand about the package is effected by helically co-wrapping one portion of the strand about another.

139.6 To protect contents from binder:

This subclass is indented under subclass 139.5. Apparatus comprising structure to prevent damage to material inside the package from physical force of a relatively narrow strand or band on the package.

139.1 Bag banding:

This subclass is indented under subclass 138.1. Apparatus wherein the cover secured is three dimensional, i.e., has a bottom and side walls but is open at the top, and is intended to not retain its shape during use, which apparatus wraps a tape or web member about the top to close and secure the top of the cover.

139.7 Adjunct comprising edge protector:

This subclass is indented under subclass 139.5. Apparatus wherein the package includes two surfaces meeting at approximately 90 degrees or sharper and wherein the means to protect serves to prevent damage to the meeting line of the two surfaces.

139.2 Reclosable, e.g., ziplock (TM) or with valve:

This subclass is indented under subclass 138.1. Apparatus wherein the supplied access is intended to be opened and closed, repeatedly.

140 WITH COVER MATERIAL PRODUCTION:

This subclass is indented under the class definition. Apparatus for creating or generating the cover material into a sheet or sheet-like form.

139.4 Adjunct comprising string or wire:

This subclass is indented under subclass 128.1. Apparatus wherein the accessory applied comprises a strand, generally round in cross-section, made of nonmetal or of metal.

(1) Note. The generation of a thin tubular stock material is considered to be the production of a sheet-like form and will be found here.

SEE OR SEARCH THIS CLASS, SUBCLASS:

414, for a method of package making including forming a binding string thereon.

(2) Note. The casting or molding of discrete container-like elements, even though the walls are relatively thin, and which elements are later filled and closed, is not considered to be the production of a sheet-like form, such apparatus being classified in Class 425, Plastic Article or Earthenware Shaping or Treating: Apparatus.

139.5 Adjunct comprising means to protect contents, e.g., padding or spacer:

This subclass is indented under subclass 128.1. Apparatus comprising structure to prevent damage to the material inside the package.

(1) Note. Included herein is a member to cushion the contents or to serve as a spacer between the contents and the cover.

SEE OR SEARCH THIS CLASS, SUBCLASS:

411, for a method of package making including application of a protective coating.

472, for a method of packaging including wrapping and cover forming with

(3) Note. The mere formation of a thin enclosing cover upon an article by a coating operation, e.g., by spraying or immersion is found in Class 118, Coating Apparatus, appropriate subclasses and in the special case where the enclosed material is in the form of a liquid which is coated by immersion, the apparatus will be classified in Class 425, Plastic Article or Earthenware Shaping or Treating: Apparatus, subclass 5.

(4) Note. The encapsulating of liquid by extrusion of both a drop and encapsulating material from a nozzle and hardening

the composite drop as formed will be found in Class 264, Plastic and Nonmetallic Article Shaping or Treating: Processes, appropriate subclasses, particularly subclass 4.

SEE OR SEARCH CLASS:

- 118, Coating Apparatus, and see (3) Note above.
- 264, Plastic and Nonmetallic Article Shaping or Treating: Processes, and see (4) Note above.

141 WITH FUGITIVE PRECONDITIONING OF COVER MATERIAL:

This subclass is indented under the class definition. Apparatus in which the cover material prior to its fabrication into a package or package element, is subjected to a means which causes some transient change in a physical or a chemical property of the cover material to modify its work-ability during packaging.

- (1) Note. Heating or cooling of the cover material and/or closure elements to improve the holding, shaping or adhering qualities are here classified.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 128.1+, for apparatus which adds some abiding feature to the cover material.
- 373.7, for apparatus for heating or cooling an out turned seam of the cover material and see the notes thereto for other heating or cooling of the cover material.

142 TAPERED OR HEADED ARTICLES:

This subclass is indented under the class definition. Apparatus for packaging articles which have an enlargement at one end thereof or which are larger at one end than at the other, having means utilizing this shape in the handling of the articles or arranging the articles so as to form a substantially uniform package.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 236, for apparatus for filling receptacles with matches and wherein the apparatus does not utilize the heads of the matches in handling nor reverse a portion of the matches in the receptacle.

- 594, for apparatus for applying a partial cover to objects such as lollipops and leaving an exposed reduced end portion.

SEE OR SEARCH CLASS:

- 86, Ammunition and Explosive-Charge Making, subclass 47 for means for packing cartridges.
- 414, Material or Article Handling, subclasses 788.2+ for means superposing or imbricating tapered or nested articles.

143 Inverting one or more units:

This subclass is indented under subclass 142. Apparatus having means to turn at least one of the articles through an angle of 180° with respect to the other articles.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 544, for apparatus for forming a contents group and inverting at least one of the portions with respect to the other portions and wherein the contents portions are not tapered or headed articles.

144 Receptacle reversing:

This subclass is indented under subclass 143. Apparatus for depositing a portion of the articles in a receptacle, turning the receptacle through an angle of 180° and depositing another portion of the articles.

145 FACING (E.G., FRUITS AND VEGETABLES):

This subclass is indented under the class definition. Apparatus for facilitating the formation of attractive display layers of articles.

- (1) Note. The display layer is usually packed by hand with the use of a facing plate and the remainder of the articles disposed in random or bulk arrangement.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 390+, for packing tables, conveyor arrangements, etc., to facilitate manual packaging.

531+, for forming multiple layers or columns of articles into groups and subsequently packaging same.

146 Variable contour facing plate:

This subclass is indented under subclass 145. Apparatus including a surface upon which the display layer is placed, the profile of the surface being alterable.

- (1) Note. The contour of the facing plate is usually made convex to place the display layer thereon and then concave to receive the remainder of the contents.

147 GROUP FORMING OF CONTENTS UNIT AND SUBSEQUENT OR FURTHER PACKAGING:

This subclass is indented under the class definition. Apparatus including means for accumulating and/or associating a plurality of contents portions of a package, by means of a plurality of feeding operations prior to completion of a package unit, and for subsequently packaging the collected portions as a unit.

- (1) Note. Feeding of similar articles from a single hopper having its discharge end divided into a plurality of separate or segregated channels has been considered to constitute a plurality of feeding operations within the terms of this and the subclasses indented hereunder.
- (1.5) Note. Packaging apparatus which feeds a plurality of contents portions from plural sources or a multiple channeled hopper directly into a receiver by the same feeding operation and in which no further packaging is performed (e.g., wrapping, closing) is not considered to involve subsequent packaging for this or indented subclasses.
- (1.7) Note. The plurality of feeding operations for this and indented subclasses must place the contents portions in the same relationship that they are to assume in the final package.
- (2) Note. The contents portions which comprise the group may be identical, dissimilar in physical and/or chemical properties, or of similar size and shape

but differing in some property, such as color or taste.

- (3) Note. Packaging apparatus in which a plurality of contents portions are segregated as a unit from a single mass or magazine of such portions, are classified as if the contents were comprised of but a single portion.
- (4) Note. Apparatus to assemble paper articles in bunches, and bunching of paper articles plus the application to the bunch of a string, cord or other securing means adapted to be knotted, will be found in 493, Manufacturing Container or Tube From Paper; or Other Manufacturing From a Sheet or Web, subclasses 374+, unless the securing means forms and adjunct to a cover, for which see this class (53), subclass 134.1, or the securing means is a band, for which see this class, subclasses 198+. For other apparatus to apply a knotted binding member, see Packaging and Binding Elsewhere Classified and the search notes associated therewith, and for other apparatus to apply a band, see the Class Definition of this class (53).
- (5) Note. The inner cover or covers of plural cover members do not constitute contents portions within the scope of this or of the subclasses indented hereunder, but have had separate provision made therefor for which see subclasses 169, 170+, 286, 449, and 558.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 54, for automatic or triggered control apparatus including means to cause separate delivery of an incomplete or defective contents portion or contents group.
- 60, for apparatus including automatic or triggered control of contents feed effected by absences of part of group contents.
- 61+, for apparatus to control the feed of a contents group, triggered by completion of the group.
- 134.1, and see (4) Note above.

- 142+, for forming a group of tapered or headed articles and subsequently packaging same.
- 168, for apparatus providing for separate or alternate supply of plural contents, packaged singly.
- 169, 170+, 558, and see (5) Note above.
- 237, for depositing contents from a plurality of different contents sources into a single receiver or receptacle.
- 244+, for successively depositing articles in a receiver or receptacle.
- 247, for simultaneously depositing a plurality of articles in a receiver or receptacle.
- 286, and see (5) Note above.
- 443, for corresponding methods of packaging.
- 449, and see (5) Note above.
- 513, for packaging apparatus in which a plurality of similar contents portions are produced by cutting or severing them from a larger amount of the contents material.
- 582, and see (4) Note above.

SEE OR SEARCH CLASS:

- 28, Textiles: Manufacturing, subclasses 289+ for devices to form skeins of filamentary stock, such as yarn, and to secure the so gathered stock into a package by means of a strand.
- 86, Ammunition and Explosive-Charge Making, subclasses 23+ for apparatus to load ammunition.
- 131, Tobacco, subclass 25 for cigar and cigarette making combined with collecting, arranging, packing or packaging, subclass 107 for processes and apparatus for tying cigars and cigarettes in bundles, and subclasses 112+ for processes and apparatus for packing plugs or shapes in groups or bundles.
- 198, Conveyors: Power-Driven, subclasses 418+ for a system of plural conveyors having means for establishing and moving a group of items, and subclasses 434+ for a system of plural conveyors having means arranging or rearranging a stream or streams of items.

- 209, Classifying, Separating, and Assorting Solids, appropriate subclasses for methods of and apparatus for classifying, separating and/or assorting solids.
- 221, Article Dispensing, subclasses 92+ for article dispensers not otherwise classified having a plurality of separate sources stacks or compartments, at least one having article dispensing means.
- 222, Dispensing, subclasses 129+ for fluent material dispensing containers having a plurality of separate compartments, at least one having dispensing means.
- 294, Handling: Hand and Hoist-Line Implements, appropriate subclasses for hand manipulated devices for gathering units into a group.
- 493, Manufacturing Container or Tube From Paper; or Other Manufacturing From a Sheet or Web, and see (4) Note above.

148 Long slender articles (e.g., cigarettes):

This subclass is indented under subclass 147. Apparatus in which the contents portions comprise articles the diameter or width of which is very small compared to the length.

- (1) Note. This and indented subclasses include patents for apparatus for forming cigarettes into groups for packaging, but in which the subsequent packaging operation is not claimed.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 236, for apparatus for depositing long slender articles in receptacles.

SEE OR SEARCH CLASS:

- 221, Article Dispensing, appropriate subclasses for article dispensing, per se.

149 Adjacent rows of unequal numbers:

This subclass is indented under subclass 148. Apparatus for forming a group of articles in juxtaposed rows or layers, the numbers of articles contained in any two adjacent layers being different.

150 Superposing rows:

This subclass is indented under subclass 148. Apparatus for forming a plurality of separate rows or layers of articles and then juxtaposing the rows so formed or for juxtaposing a plurality of previously formed rows of articles.

151 Hopper with multiple channeled outlet:

This subclass is indented under subclass 148. Apparatus having a source of supply for the articles, the outlet of the source being divided into a plurality of adjacent channels or ways from which the articles are removed as a group.

SEE OR SEARCH CLASS:

198, Conveyors: Power-Driven, subclasses 311, 359+, and 523+ inter alia for a chute or other gravity conveyor combined with a power-driven conveyor.

152 Formed in vertically spaced ways and simultaneously removed:

This subclass is indented under subclass 147. Apparatus having a plurality of substantially horizontal channels or tracks spaced in a vertical plane in which articles are deposited to form a group and then concurrently ejected therefrom.

SEE OR SEARCH CLASS:

193, Conveyors, Chutes, Skids, Guides, and Ways, appropriate subclasses for a single chute feeding a plurality of chutes.
414, Material or Article Handling, subclasses 788.1+ for means for forming vertical self-sustaining or stable stacks of articles.

153 Plural groups:

This subclass is indented under subclass 152. Apparatus for forming a plurality of horizontally spaced groups or layers of articles in the channels or ways, all of the groups then being simultaneously ejected from the channels.

154 From plural or different supply sources:

This subclass is indented under subclass 147. Apparatus in which the plural feeding operations are from two or more distinct contents retainers.

SEE OR SEARCH THIS CLASS, SUBCLASS:

168, for apparatus having selective or alternate supply of plural covers and/or plural contents.
237+, for apparatus for depositing contents in a receptacle from two or more distinct contents sources.

SEE OR SEARCH CLASS:

221, Article Dispensing, appropriate subclasses for article dispensers, per se.

155 Diverse forms or shapes of units:

This subclass is indented under subclass 154. Apparatus for packaging in which the external contours or physical dimensions of the contents portions are so different as to require dissimilar feed mechanisms.

156 Package reinforcing sheet or trough:

This subclass is indented under subclass 155. Apparatus for packaging in which at least one of the contents portions is of sheet material which is either flat or bent up to partly encircle another portion of the contents and is of sufficient rigidity to materially assist the cover in establishing or maintaining the desired shape of the completed package.

SEE OR SEARCH CLASS:

493, Manufacturing Container or Tube From Paper; or Other Manufacturing From a Sheet or Web, subclass 89 for making a rigid container including assembling therewith structure reinforcement.

157 Insert or separating sheet:

This subclass is indented under subclass 155. Apparatus in which at least one of the portions of the contents is very thin in relation to its length and breadth.

- (1) Note. The inserted sheet may carry pre-inscribed indicia thereon, such as a label, coupon, advertising matter, instructions pertaining to other parts of the contents, etc.
- (2) Note. The inserted sheet may be placed between other contents portions.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 111, for devices combined with a packaging apparatus to imprint on the contents.

SEE OR SEARCH CLASS:

- 270, Sheet-Material Associating, subclasses 52.19+ for inserting an additional sheet into a folded sheet.

158 Joined receptacle or pockets:

This subclass is indented under subclass 147. Apparatus including means for individually inserting various of the portions of the contents within two or more separate and distinct cavities or portions of a single cover, and subsequently to fold the cover in such a manner that the filled cavities or portions therein are moved relatively one to the other to further enclose the contents.

167 COMBINED:

This subclass is indented under the class definition. Apparatus having means associated therewith for performing some function in addition to or in perfecting the basic encirclement or encasement of the contents in its cover and not provided for in the preceding subclasses.

- (1) Note. The combination of mechanism to feed the cover, cover web or blank including severing means therefor, mechanism to feed the contents, mechanism to apply an adhesive to the cover, mechanism to cause the cover to be placed around or about the contents, or to place the contents within the cover and close the same, and mechanism to discharge the completed package from the machine, which mechanism may have incorporated therewith a stacking or piling device where no further packaging is involved, has not been considered as including means or features perfecting the basic encirclement or encasement of the contents in its cover.
- (2) Note. In this subclass have been placed patents which claim packaging machines within the scope of this class and add an additional feature thereto such as a vac-

uum cleaner to pick up severed edges of a tea bag; a chute to catch dust and convey same clear of the machine; a portable conveyor to gain access to an improperly wrapped article; a brush to cause an incompletely filled package to leave a vacancy; brushes for cleaning spilled granular contents from the machine bed; a tray to catch crumbs during a bread wrapping operation; a device to remove surplus ice cream; a device which imprints web contents, forms a carbon copy, folds contents into separate covers and stores the copies; a device to smooth the cover after the package is formed; a device to remove a rubber band from contents parts and to place a cover over said parts; and machines which alternately form a carton (a Class 93 operation) or close the flap or flaps of a filled carton; and machines which test or inspect.

- (3) Note. See "Packaging and Binding Elsewhere Classified" of the Class Definition and the search notes associated therewith for various related loci of art for packaging and binding combined with other operations.

SEE OR SEARCH CLASS:

- 141, Fluent Material Handling, With Receiver or Receiver Coating Means, subclasses 85+ for drip collecting and machine parts cleaning in fluent material filling systems; subclasses 115+ for overfill removal in such systems.

168 SELECTIVE OR ALTERNATE SUPPLY OF PLURAL COVERS AND/OR PLURAL CONTENTS:

This subclass is indented under the class definition. Apparatus in which any one of two or more sources of covers or cover material and/or any one of two or more sources of contents may be used in conjunction with a single packaging device either by manual adjustment of the machine or by a cyclic control.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 154+, for apparatus to form groups of contents units by feeding same from plural or different supply sources.
- 202, for apparatus which package articles in two or more separate lines, or streams.

SEE OR SEARCH CLASS:

- 221, Article Dispensing, subclasses 92+ for article dispensing devices not otherwise provided for having plural sources, stacks, or compartments for articles to be dispensed, with means to release or eject articles therefrom.

169 SLIDING TRAY AND SHELL TYPE PACKAGE:

This subclass is indented under the class definition. Apparatus including means for (1) arranging the contents with respect to a first sliding cover section, which section consists of a slide, drawer or tray having at least five sides and for encompassing said slide by a second section having the form of a shell, open at one or both ends, or for (2) inserting a filled slide drawer or tray having at least five sides into a shell; the two sections having relative sliding motion after assembly to give access to the contents, the shell and portions of the slide forming a complete encasement of the contents.

- (1) Note. Either one or both of the sections can be preformed or the apparatus can form either one or both of the sections.
- (2) Note. This subclass includes the opening of the shell or shuck in combination with the placing of the slide herein.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 176, for apparatus to apply plural layer covers where one layer is a band.

SEE OR SEARCH CLASS:

- 229, Envelopes, Wrappers, and Paperboard Boxes, subclass 125.125 for a paperboard box having a sleevelike closure.

170 PLURAL LAYER PACKAGE MATERIAL:
This subclass is indented under the class definition. Apparatus including means to encircle or encase the contents of a single package in two or more separate and distinct covers, one cover being superimposed over the other.

- (1) Note. The covers may be associated with the contents either as a multi-layered unit or as layers applied in succession.
- (2) Note. The application of a closure and a super-imposed hood or cap at a single station in substantially a single infeed operation is not considered to be plural layer cover application for this subclass. See the search notes below.
- (3) Note. The application of a cork, cap or crown closure and a sealing spot, disc or gasket (i.e.; contents contacting, protective element) - substantially, simultaneously with the assembling operation - is not considered to be plural layer cover application for this subclass. See the search note below for the locus of this art.
- (4) Note. The insertion of a disc into a hood or cap so as to depress said disc and a portion of the hood or cap within the aperture of a receptacle is not considered to be plural cover layer application for this subclass. See the search note below for the locus of this art.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 129.1, for application of a cork, cap or crown closure and a sealing spot, disc or gasket (i.e.; contents contacting, protective element) - substantially, simultaneously with the assembling operation.
- 130.1, for insertion of a disc into a hood or cap so as to depress said disc and a portion of the hood or cap within the aperture of a receptacle is not considered to be plural cover layer.
- 131.1, for apparatus to apply plural cover layers where one layer is a coating.

- 169, for apparatus for forming a package having a cover of the slide and shell type.
- 266.1, for apparatus to fill a receptacle consisting of two or more preformed, nested cover members and to subsequently close same.
- 286, for apparatus to close a filled package having plural cover members.
- 287+, for application of a closure and a super-imposed hood or cap at a single station in substantially a single infeed operation. See (2) Note.
- 449, for corresponding methods of packaging.
- 580, for apparatus for applying plural partial covers which do not overlap or are not superimposed.

SEE OR SEARCH CLASS:

- 428, Stock Material or Miscellaneous Articles, appropriate subclasses, for a stock material product in the form of a single or plural layer web or sheet, and especially subclasses 121+ for such a product embodying a component with a fold at an edge, and subclasses 192+ for such a product having specific edge feature.
- 493, Manufacturing Container or Tube From Paper; or Other Manufacturing From a Sheet or Web, subclasses 111+ for apparatus to fold a box blank into shape and to afterwards apply ornamental covering paper thereto; and subclasses 386+ for apparatus to fix covering material to a box otherwise complete.

171 Plural packages in outer cover:

This subclass is indented under subclass 170. Apparatus for encasing contents in a cover or receptacle and for further enclosing a plurality of units so formed in an outer cover or receptacle; or for placing a plurality of receptacles in an outer cover or receptacle and placing contents in the inner receptacles.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 147+, for apparatus for placing covers over individual contents parts, grouping the parts into a contents unit, and per-

forming a subsequent or further packaging operation.

172 Concurrently formed with multi-layered blank:

This subclass is indented under subclass 170. Apparatus for folding, wrapping or otherwise forming two or more flat, superimposed blanks into a plural layered cover for the contents, at least the initial wrap being applied simultaneously to all the blanks.

- (1) Note. A laminated cover material, having the various layers uniformly adhered to each other over their contacting surfaces prior to the fabrication of the material into a cover and handled by the packaging machine as though there were but a single layer, is classified as if the cover material were in fact composed of but a single layer.

173 Filling preformed receptacle and subsequent covering:

This subclass is indented under subclass 170. Apparatus including means to place or position the contents within a previously shaped receptacle and to then further incase or encircle the filled receptacle by placing an additional cover layer thereabout.

- (1) Note. See the Class Definition, Glossary, for the meaning of the term "receptacle".
- (2) Note. The term "cover" as used above does not include the cap or hood closure applied to a preformed container for completing the encasement of contents or for shielding the aperture portions of said container subsequent to filling. See subclass 266.1 and Notes thereunder for the locus of such art.

SEE OR SEARCH THIS CLASS, SUBCLASS:

266.1, see (2) Note.

174 Wrapping and subsequent filling of pre-formed receptacle:

This subclass is indented under subclass 170. Apparatus for encasing or encircling the contents by folding a cover layer thereabout and for then placing the so-formed package within a previously shaped receptacle.

175 Lining preformed receptacle:

This subclass is indented under subclass 170. Apparatus including means for inserting a cover layer within and in intimate relation with respect to the inner walls of a previously shaped receptacle prior to the introduction of the contents.

- (1) Note. The inner cover layer may be either a separate receptacle or a blank for wrapping or handling the contents.

SEE OR SEARCH CLASS:

493, Manufacturing Container or Tube From Paper; or Other Manufacturing From a Sheet or Web, subclasses 93+ for inserting a lining in a rigid container.

176 At least one layer a band:

This subclass is indented under subclass 170. Apparatus for applying two or more superimposed cover layers at least one of which completely encircles the contents in one direction only, such as girth, leaving the contents and/or the other cover layer or layers completely exposed on two sides or ends and which has frictional contact with the contents so as to be retained thereon.

- (1) Note. The band may be of narrow width, such as a cigar band and may serve as a retaining means for an inner cover layer.
- (2) Note. See the class definition, Glossary, for the meaning of "contents".

SEE OR SEARCH THIS CLASS, SUBCLASS:

135.1, for apparatus to apply a second layer of sheet material to a cover which second layer does not encircle the contents.

138.1, and see the notes thereto for apparatus to apply a binding or tying string about a package.

169, for apparatus to apply covers of the slide and shell type.

580+, for apparatus to apply plural partial covers in such a manner that the covers are not superimposed or do not overlap one on the other and espe-

cially subclass 198 for apparatus to apply single or plural spaced bands.

201 CONVERTIBLE:

This subclass is indented under the class definition. Apparatus which can be caused to serve as any one of two or more distinctly different packaging devices by an adjustment, addition, removal or reassembly of one or more of the parts.

202 PLURAL LINE PACKAGING:

This subclass is indented under the class definition. Apparatus in which two or more separate streams of contents are coincidentally packaged as they move through the machine.

SEE OR SEARCH THIS CLASS, SUBCLASS:

147+, for apparatus which includes a plural line packaging operation, and selects and wraps together units supplied by each of the lines.

168, for apparatus for packaging with selective or alternative supply of plural covers and/or contents.

546, for plural line apparatus of the progressively seamed cover webs or web folds type.

203 WRAPPING MACHINES:

This subclass is indented under the class definition. Apparatus by which a flexible or foldable cover material is bent, with or without creasing, around the contents to encase it.

- (1) Note. This apparatus shapes the cover material into contents retaining form subsequent to the bringing together of contents and cover material. For apparatus which shapes the cover material to contents retaining form prior to association of contents therewith see this class, subclasses 558+.
- (2) Note. This apparatus shapes the cover material so as to completely enclose the contents therein. For apparatus which shapes the cover material around the contents in such manner as to leave the contents exposed, see this class subclasses 580+.

- (3) Note. Shaping a closure into engagement or conformity with a portion of a pre-formed receptacle is not considered wrapping for this and indented subclasses. Such apparatus will be found in subclasses 285+.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 285+, for apparatus for closing packages and filled receptacles, and see (3) Note.
461+, for corresponding method.
558+, see (1) Note.
580+, see (2) Note.

204 **Annular package:**

This subclass is indented under subclass 203. Apparatus by which a cover is applied to contents having an opening extending there-through and the cover material is inserted into or through such opening.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 409, for corresponding methods.
581, for partial covers comprising spindles or cores.

SEE OR SEARCH CLASS:

- 206, Special Receptacle or Package, subclasses 303+ for a package for an annular article (e.g., tire, wire coil, etc.).
242, Winding, Tensioning, or Guiding, subclasses 434+ for winding elongated material through a central opening of a ring-shaped core.

205 **Granular contents material:**

This subclass is indented under subclass 203. Apparatus by which the cover is bent around contents that is particulate.

SEE OR SEARCH CLASS:

- 141, Fluent Material Handling, With Receiver or Receiver Coacting Means, appropriate subclasses for material handling systems for placing particulate and other fluent materials in separable receivers.

- 493, Manufacturing Container or Tube From Paper; or Other Manufacturing From a Sheet or Web, subclass 296 for making folded powder papers such as are used by druggist to enclose medicinal powders.

206 **Packet or envelope type:**

This subclass is indented under subclass 203. Apparatus by which the cover material is bent around the contents so that portions of the cover on opposite sides of the contents are formed by a single fold or crease, the thickness of the contents being accommodated by a slight flexing of opposed faces of the cover.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 460, for corresponding methods.

207 **Notched or corner-slit cover blanks:**

This subclass is indented under subclass 203. Apparatus in which the cover material to be bent has portions which are cut out, or partially severed or incised adjacent an edge of the cover material.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 376.3, for apparatus for closing packages by folding a single flap.
376.4+, for apparatus for closing packages by folding multiple flaps.

208 **With cover notching or slitting:**

This subclass is indented under subclass 207. Apparatus combined with mechanism for cutting out or partially severing or incising the cover material.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 128.1, for a machine for notching a cover blank for something other than forming a notch or slit as an aid for folding the blank.

SEE OR SEARCH CLASS:

- 83, Cutting, appropriate subclasses for pertinent subclass(es) as determined by schedule review.

- 493, Manufacturing Container or Tube From Paper; or Other Manufacturing From a Sheet or Web, subclasses 58+ for making a container including cutting and form-scoring a carton blank.
- 209 Prepositioned cover and contents transported to wrapping means:**
This subclass is indented under subclass 203. Apparatus in which the cover blank and the contents material are initially brought together and are then conveyed to another location for the bending of the cover material around the contents.
- 210 Cinched or wiped around initial wrap:**
This subclass is indented under subclass 203. Apparatus in which the bending of the cover material about the contents includes placing one edge, or portion of the cover material making up the longitudinal seam, against one side of the contents and then bringing the cover material across the opposite side of the contents and then the other edge of the cover around the contents and into seaming relation to the first edge.
- 211 By rotation of contents:**
This subclass is indented under subclass 210. Apparatus in which the bringing together of edges making up the longitudinal seam is effected by revolving the contents about an axis passing through the contents.
- SEE OR SEARCH CLASS:
131, Tobacco, subclasses 27+ for cigar and cigarette making apparatus in which the tobacco is rotated to place a wrapper thereon.
156, Adhesive Bonding and Miscellaneous Chemical Manufacture, subclasses 446+ for applying a label to a rotating article.
- 212 Stacked contents (e.g., coins):**
This subclass is indented under subclass 211. Apparatus in which the contents is comprised of a series of articles each positioned with respect to any adjacent article only by a face-to-face relationship of one of two opposed surfaces.
- (1) Note. The stacked articles are frequently coins.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
254, for apparatus for filling receptacles with coins in stacked formation.
531+, for apparatus having means for stacking the contents for packaging.
- 213 Hand manipulated type:**
This subclass is indented under subclass 212. Apparatus in which the rotation of the stack is by the hands of a person.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
219, for manual wrapping on a fixed support.
390+, for aids to manual packing.
- 214 Cover at least in part adhered to contents:**
This subclass is indented under subclass 211. Apparatus in which the cover material is attached to the contents in whole or in part by an adhesive action therebetween.
- (1) Note. The adhesive may be temporary and effective only during the wrapping operation or it may permanently adhere the cover and contents.
- 215 Apron type:**
This subclass is indented under subclass 211. Apparatus in which the rotation of the contents and cover material is by means of a flexible band which encircles the contents sufficiently to grip it.
- SEE OR SEARCH CLASS:
100, Presses, subclass 87 for presses having, additionally, means for winding material in which the winding means includes a flexible member and the material is wound within a loop formed in the flexible member.
131, Tobacco, subclasses 47+ for apron type cigarette making machines.
- 216 Rolling movement:**
This subclass is indented under subclass 211. Apparatus in which the axis of rotation of the contents translates as the cover material is wrapped around the contents.

217 With end twisting:

This subclass is indented under subclass 211. Apparatus in which the projecting ends of the cover material are rotated relative to the contents to form an enclosure for the package.

SEE OR SEARCH THIS CLASS, SUBCLASS:

370, for apparatus for closing package by twisting and see the Notes thereto for related art elsewhere classified.

218 Fixed package support during wrapping:

This subclass is indented under subclass 203. Apparatus in which the bending of the cover material is completed in the location at which the cover material and the contents were first associated.

- (1) Note. In this apparatus the contents and a portion of the cover material usually remain in fixed relation to a support while other portions of the cover material are being bent around the contents.

219 Hand manipulated type:

This subclass is indented under subclass 218. Apparatus in which the cover is folded over the contents by the hands of a person.

SEE OR SEARCH THIS CLASS, SUBCLASS:

213, for manual wrapping with rotation of contents.
390+, for aids to manual packing.

220 Cover-wiping passage or pocket for initial wrap:

This subclass is indented under subclass 203. Apparatus in which the bending of the cover material about the contents is effected by motion of an associated cover blank and contents through a confining space or passage such that the cover material is smoothed along the sides of the contents by the walls of the passage.

SEE OR SEARCH CLASS:

156, Adhesive Bonding and Miscellaneous Chemical Manufacture, subclasses 483+ for laminating devices in which the applied flexible sheet is bent around the article to which it is

secured by movement along a passageway.

221 Cup- or pouch-forming initial wrap:

This subclass is indented under subclass 220. Apparatus in which one surface of a contents contacts a cover member and forces the cover member through a second member having a substantially completely enclosed opening, the entire periphery of the opening smoothing and/or wiping the cover member around the contents so that the contacting surface of the contents and the surfaces contiguous thereto are snugly enclosed by the cover member.

- (1) Note. It is not necessary that all portions of the cup or pouch extend above the top of the contents.
- (2) Note. This particular enclosure of the contents constitutes and "initial wrap"; see the Class Definition, Glossary.

SEE OR SEARCH THIS CLASS, SUBCLASS:

464, for corresponding methods.

222 Four-sided corner flap forming chute or pocket:

This subclass is indented under subclass 221. Apparatus in which the cup or pouch is one of a substantially rectangular bottom and four contiguous sides.

223 Package advanced through succeeding fold chute:

This subclass is indented under subclass 222. Apparatus in which the partially wrapped packaged as it is delivered by the four-sided corner forming chute is next passed through a second fold chute for further folding of the cover material about the contents.

SEE OR SEARCH THIS CLASS, SUBCLASS:

230+, for wrapping machines in which a package having an initial U-fold wrap is passed through a succeeding fold chute.

224 Package advanced by folding carrier:

This subclass is indented under subclass 222. Apparatus in which the package as shaped by the four-sided corner forming chute or pocket

is advanced by a movable package support, during which advance the cover material is further folded about the contents.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

232+, for wrapping machines in which a package having an initial U-fold wrap is advanced by a folding carrier.

225 Rotary turret or carrier:

This subclass is indented under subclass 224. Apparatus in which the movable package support is one which carries the package in a circular path.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

234, for wrapping machines in which a package having a U-fold initial wrap is advanced by a folding carrier of the rotary type.

226 With end crimper or in-folder:

This subclass is indented under subclass 221. Apparatus in which ends of the cover material projecting beyond the contents are pleated inwardly without the formation of end flaps.

227 With end twister:

This subclass is indented under subclass 221. Apparatus in which projecting ends of the cover material are collapsed and rotated relative to the contents.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

370, for apparatus for closing packages by twisting and see the Notes thereto for related art elsewhere classified.

228 U-fold forming initial wrap:

This subclass is indented under subclass 220. Apparatus in which the contents with one face contacting its cover material is passed through a die passage or pocket such that the two opposite adjacent sides of the package have the cover smoothed along the same so that the two sides and original contacting side of the cover material form a U in cross-section.

229 Outturned longitudinal seam:

This subclass is indented under subclass 228. Apparatus in which the free edges of the U-fold are brought together so that the inner faces of such edges are brought into face-to-face relationship.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

373.2, for apparatus for closing packages by an outturned seam closure and see the Notes thereto for related art elsewhere classified.

230 Package advanced through succeeding fold chute:

This subclass is indented under subclass 228. Apparatus in which the package as it leaves the U-fold passage is then moved through a second passage containing folding elements which are stationary with respect to the passage.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

224+, for wrapping machines in which a package having an initial cup or pouch wrap is passed through a succeeding folding chute.

231 Via intermediate non-folding carrier:

This subclass is indented under subclass 230. Apparatus in which a transporting means is supplied to convey the package from the initial U-fold apparatus to a succeeding fold chute without any folding taking place during the transfer.

232 Package advanced by folding carrier:

This subclass is indented under subclass 228. Apparatus in which the package as shaped by the die passage or pocket is advanced by a movable package support, during which advance the cover material is further folded about the contents.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

224+, for apparatus in which a package having an initial cup or pouch wrap is advanced by a folding carrier.

233 Continuously moving carrier:

This subclass is indented under subclass 232. Apparatus in which the package is loaded on the conveyor and the package forwarded by the conveyor through the folding means without the conveyor stopping.

234 Rotary turret or carrier

This subclass is indented under subclass 232. Apparatus in which the conveyor progresses the packages about a circular path.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

225, for wrapping machines in which a package having a four-sided cup or pouch initial wrap is advanced by a folding carrier of the rotary type.

235 DEPOSITING ARTICLES AND ARRANGING MATERIAL IN PREFORMED RECEPTACLES:

This subclass is indented under the class definition. Apparatus by which covers at least in part previously formed into receptacles are charged with contents consisting of or including articles or consisting of fluent materials which are placed in definite permanent patterns or arrangements in the receptacles.

(1) Note. A charge which is formed from a fluent material (e.g., cotton or fibers) and is then placed in the receiver as a unit and is handled as an article during the filling operation by means which would not likewise handle fluent material, is considered to be an article for this and indented subclasses.

(2) Note. For this and indented subclasses it is required that the filling mechanism deposit the contents in the receptacle or the receptacle on the contents, or that a guide be provided to associate the contents and receptacle in a hand filling operation.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

142+, for packaging tapered or headed articles.

145+, for packaging fruits and vegetables in which a display layer is formed.

147+, for associating a group of articles into a contents unit and then placing the same into a receiver.

473+, for corresponding methods.

558+, for forming or partially forming a receiver and then placing the contents therein.

SEE OR SEARCH CLASS:

141, Fluent Material Handling, With Receiver or Receiver Coating Means, appropriate subclasses, for filling preformed receivers with liquids and fluent material and for disposing fluent material in receivers where the arrangement of the material is merely a result of the flow of material or the action of a discharge assistant.

221, Article Dispensing, appropriate subclasses for article dispensers, per se, or those operated merely by engagement with a receptacle, if the operation could also be accomplished by hand and no special modification is made to accommodate the particular shape of the receptacle.

236 Long slender articles (e.g., matches):

This subclass is indented under subclass 235. Apparatus in which the contents comprises articles the diameter or width of which is very small compared to the length.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

124+, for means for compacting or agitating and packaging long slender articles.

142+, for apparatus particularly adapted to package tapered or headed articles.

148+, for apparatus for forming groups of long, slender articles and subsequently packaging same.

169, for apparatus for filling a tray with matches and inserting the tray into an outer shell or shuck.

SEE OR SEARCH CLASS:

144, Woodworking, subclass 61 for apparatus for making and boxing matches.

237 Plural filling stations and/or contents sources for single receptacle:

This subclass is indented under subclass 235. Apparatus in which a single receptacle has deposited therein contents from a plurality of distinct contents retainers and/or at a plurality of separate locations.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

154+, for apparatus which forms a contents unit from a plurality of separate contents sources and subsequently packages the unit.

168, for apparatus for alternately or selectively supplying contents to be packaged from different contents sources.

202, for apparatus for coincidentally packaging two or more separate streams of contents.

SEE OR SEARCH CLASS:

141, Fluent Material Handling, With Receiver or Receiver Coating Means, subclass 100 for filling apparatus including plural material supplies or placing plural materials or charges of fluent material in a receiver.

238 Diverse forms or shapes of units:

This subclass is indented under subclass 237. Apparatus in which the components of the contents have differing contours or dimensions such as to require dissimilar depositing mechanisms.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

155+, for apparatus which forms a contents unit from portions so dissimilar as to require different feed mechanisms and subsequently packages the unit.

239 Article and fluent material:

This subclass is indented under subclass 237. Apparatus in which the contents deposited in the receptacle comprises at least one article and fluent material.

(1) Note. This subclass takes devices for depositing fluent material or articles into receivers wherein there is provided

means to support an article in the receiver during the deposit of the fluent material or wherein the fluent material or article depositing means is so constructed as to take cognizance of the presence of an article or fluent material in the receiver.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

474, for corresponding processes.

SEE OR SEARCH CLASS:

221, Article Dispensing, subclass 96 for dispensers for both articles and fluent materials.

240 Successive filling stations:

This subclass is indented under subclass 237. Apparatus in which a single receptacle has contents deposited therein at a plurality of separate locations.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

266.1+, for apparatus for filling a receptacle at one station and closing it at another station.

241 Contents support extends through receptacle (e.g., garment baggers):

This subclass is indented under subclass 235. Apparatus having means to suspend or support the contents, said means passing through the receptacle prior to its association with the contents.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

256, for a guide or support on which a garment is placed, the support and garment then being inserted into a receptacle (e.g., bag) and the support withdrawn leaving the garment in the receptacle.

242 Bottom filling:

This subclass is indented under subclass 235. Apparatus having means to support or feed a receptacle with the filling opening facing downward and for placing the contents therein while in said position.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

241, for devices to apply a bag to a garment by drawing the bag down over the suspended garment.

SEE OR SEARCH CLASS:

141, Fluent Material Handling, With Receiver or Receiver Coacting Means, subclass 113 for apparatus for filling receivers with fluent material through the bottom or while inverted.

243 **With turnover:**

This subclass is indented under subclass 242. Apparatus having means to turn the receptacle through an angle of substantially 180° in a vertical plane after the contents has been deposited therein.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

392, for means to turn over a filled receptacle after a manual packing operation.

SEE OR SEARCH CLASS:

141, Fluent Material Handling, With Receiver or Receiver Coacting Means, subclasses 164, 171, 273+ for fluent material filling systems involving inversion or tilting of the receiver.

244 **Successive deposits of articles:**

This subclass is indented under subclass 235. Apparatus having means to place in turn a plurality of single articles or groups of articles into a receptacle.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

237+, for supplying contents to receivers from different sources of supply or at successive filling stations.

254, for guides used in stacking coins or discs in a receiver by hand.

534, for means for forming groups of articles and successively depositing the groups in a receiver.

245 **Lowered support:**

This subclass is indented under subclass 244. Apparatus in which the holding means for the receiver is depressed as the articles are successively deposited in the receiver.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

535+, for means for depositing successive articles on a lowering support and then packaging the articles or for forming groups of articles and successively depositing the groups in a receptacle on a lowering support.

SEE OR SEARCH CLASS:

141, Fluent Material Handling, With Receiver or Receiver Coacting Means, subclasses 100+ for filling a receiver with plural charges of fluent material; subclasses 258+ and 263+ for fluent material filling systems having relatively receding receiver support and filling means.

246 **Compartmented receptacle:**

This subclass is indented under subclass 244. Apparatus in which the receptacle is divided into sections, each section receiving a single article or group of articles.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

263, for means to divide a receptacle into sections for the placement of the contents therein, the means being then removed and forming no part of the completed package.

539, for forming a group of articles by a plurality of feeding operations and then placing the group into a compartmented receiver.

247 **Simultaneous deposit of plural articles:**

This subclass is indented under subclass 235. Apparatus for concurrently placing a plurality of articles in a receptacle, the article being handled individually by the depositing mechanism.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

531+, for apparatus for arranging a group of articles in a layer, stack or column and

then packaging same, and note particularly subclasses 160 and 166.

248 With means to retard free fall of articles into receptacle:

This subclass is indented under subclass 235. Apparatus having means to impede the progress of articles moving solely under the influence of gravity prior to or as they enter the receptacle.

- (1) Note. The fall retarding means is usually to prevent the breakage or bruising of the articles.

SEE OR SEARCH CLASS:

- 193, Conveyors, Chutes, Skids, Guides, and Ways, subclass 32 for chute conveyors having retarders.
198, Conveyors: Power-Driven, subclass 534 for a power-driven conveyor combined with a chute having means to retard movement of the conveyed load.

249 With movement of receptacle to or from filling station:

This subclass is indented under subclass 235. Apparatus having means to affirmatively move a receptacle to and/or from the point of filling.

- (1) Note. A filling means (e.g., plunger) which forces the contents into a receptacle and coincidentally or by an extended motion moves the receptacle away from the point of filling is not included in this or indented subclasses.

SEE OR SEARCH THIS CLASS, SUBCLASS:

258+, see (1) Note above.

SEE OR SEARCH CLASS:

- 141, Fluent Material Handling, With Receiver or Receiver Coacting Means, subclasses 129+ for means to supply successive receivers and fill with fluent material; subclasses 250+ for filling receivers with fluent materials including means to move the receivers to, from or during flow relation.

250 With means to supply successive receptacles:

This subclass is indented under subclass 249. Apparatus in which a series of receptacles are supplied to the filling station by the means which affirmatively moves the receptacles.

SEE OR SEARCH THIS CLASS, SUBCLASS:

571+, for apparatus for supplying successive receptacles from a magazine and opening and filling same.

251 Contents or receptacles transfer between conveyers:

This subclass is indented under subclass 250. Apparatus in which both the receptacles and contents units are carried by conveying means and means are provided to move the contents from its conveyor to the receptacle conveyor or vice versa to fill the receptacles with the contents units.

252 By reciprocable pusher:

This subclass is indented under subclass 251. Apparatus wherein the means to transfer the contents units or receptacles comprises a member which has alternate forward and backward motion.

253 Rotary:

This subclass is indented under subclass 250. Apparatus in which the conveying means for the receptacles comprises a member which partakes of movement about a fixed axis in one direction only.

254 Disc packers:

This subclass is indented under subclass 235. Apparatus for filling receptacles with disc like articles, usually coins, in stacked formation.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 212+, for machines for wrapping stacked discs or coins.
531+, for apparatus for forming stacks of articles and performing a subsequent packaging operation.

255 Guide or inserted form or support for article contents:

This subclass is indented under subclass 235. Apparatus having contents receiving means in or on which the contents is placed, the receiving means then being inserted into the receptacle or the receptacle into the receiving means and the receptacle with its contents then removed; or having directing means which enters or contacts the receptacle to guide the contents into the receptacle.

SEE OR SEARCH CLASS:

- 141, Fluent Material Handling, With Receiver or Receiver Coating Means, subclasses 279+ and 331+ for funnels and similar fluent material guides; subclasses 297, 316, 365, and 390+ for internal and/or external forms or protectors for receivers in fluent material filling systems.
- 452, Butchering, subclasses 35+ for similar devices used for stuffing sausage meat into sausage casings.

256 Garment baggers:

This subclass is indented under subclass 255. Apparatus for applying a cover, usually in the form of a paper sack, to an article of clothing.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 241, for garment baggers in which the support for the garment extends through the cover prior to its association with the garment.

257 With size adjusting means:

This subclass is indented under subclass 255. Apparatus in which means are provided to selectively vary the dimension of the guide or inserted form or support to accommodate different size receptacles and/or contents units.

SEE OR SEARCH CLASS:

- 100, Presses, subclass 242 for presses of the box and piston type which are adjustable in size and may include an adjustable size discharge guide through which the pressed material is expelled.

258 With injector (e.g., filling plunger):

This subclass is indented under subclass 255. Apparatus having means to affirmatively move the contents into the receptacle, said means being movable with respect to the guide or inserted form or support.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 251+, for affirmative means for moving contents into receptacles wherein the contents and receptacles are carried by conveyors.

SEE OR SEARCH CLASS:

- 100, Presses, subclass 218 for reciprocating presses including ejectors for displacing the material from the press. The mere claiming of a discharge guide from the press which may be for the disclosed purpose of holding a receiver (e.g., mattress tick) does not preclude classification in Class 100.

259 Endless belt:

This subclass is indented under subclass 258. Apparatus in which the means to affirmatively move the contents is in the form of or is carried by at least one continuous member.

260 With retractable, collapsible or separable portion to permit withdrawal or to dump contents:

This subclass is indented under subclass 255. Apparatus in which the form or support on which the contents is placed has a portion which is movable relative to the remainder of the form after insertion into the receptacle to permit the form to be withdrawn leaving the contents in the receptacle; or in which the form is made of separate or separable parts which are withdrawn from the receptacle individually.

261 Expansible:

This subclass is indented under subclass 255. Apparatus in which the guide or inserted form is capable of spreading or extending to conform to or expand the receptacle to facilitate placement of the contents therein.

SEE OR SEARCH CLASS:

141, Fluent Material Handling, With Receiver or Receiver Coating Means, subclass 312 for expansible spreading or holding means for the receiver in fluent material filling systems.

262 Spring form:

This subclass is indented under subclass 261. Apparatus in which the guide or form comprises an element or elements made of elastic material which exert a return pressure when bent out of their normal rest position.

263 Receptacle divider:

This subclass is indented under subclass 255. Apparatus having means which partitions or divides the receptacle during the filling thereof and is then removed after the receptacle has been at least partially filled.

264 WITH MEANS APPLYING CLOSURES OF INTERNALLY STOPPERED RECEPTACLES:

This subclass is indented under the class definition. Devices including means to complete the enclosure of contents by seating a separate-type closure captive within a receptacle.

- (1) Note. Included here are devices which both fill and close and devices which merely close.

SEE OR SEARCH THIS CLASS, SUBCLASS:

266.1+, for devices which fill and close preformed receptacles.

287+, for devices which apply separate closures to filled packages or receptacles.

265 WITH MEANS APPLYING ATTACHED OR CONNECTED CLOSURES OF BAIL STOPPERED RECEPTACLES:

This subclass is indented under the class definition. Devices for completing the enclosure of contents in a receptacle with a captive or attached bail-type closure, including means to seat said closure.

- (1) Note. Included here are devices which both fill and close and devices which merely close.

SEE OR SEARCH THIS CLASS, SUBCLASS:

266.1+, for devices which fill and close preformed receptacles.

287+, for devices which apply separate closures to filled packages or receptacles.

266.1 MEANS TO FILL AND CLOSE PREFORMED RECEPTACLE:

This subclass is indented under the class definition. Apparatus by which a cover at least in part previously formed into a receptacle is charged with contents and the enclosure of the contents thereafter completed.

SEE OR SEARCH THIS CLASS, SUBCLASS:

174, for apparatus in which the contents are first covered and then the cover and contents are placed in a preformed receptacle.

175, for apparatus in which a lining is applied to a preformed receptacle prior to the placing of the contents within the lined receptacle.

381+, for a package unfolding device, per se.

467, for a method of package making including filling a preformed receptacle and closing the package.

558+, for apparatus which makes a receptacle and then inserts contents therein.

900, a cross-reference art collection for apparatus for or a method of handling or manipulating a capsule.

SEE OR SEARCH CLASS:

86, Ammunition and Explosive-Charge Making, subclasses 25+ for apparatus for loading explosives into a shell and for closing the open end thereof.

219, Electric Heating, subclasses 59.1+, 78.16 and 604+ for sealing off a metal tube by the use of electrically generated heat.

267 With compound fill-close station:

This subclass is indented under subclass 266.1. Apparatus, wherein one of two receptacles simultaneously charged with diverse contents at separate stations is also sealed with a closure at one of said stations, said one receptacle hav-

ing been previously partly charged at the other of said stations.

- (1) Note. Supplying syrup to one bottle, while adding water or carbonated water to a bottle previously syruiped, and then closing the bottle at the water or carbonated water station is classified here.
- (2) Note. Patents which disclose, but do not claim, a compound fill-close station have been classified on the basis of the claimed disclosure; that is, on the basis of a filling apparatus or a simple fill-close apparatus.

SEE OR SEARCH THIS CLASS, SUBCLASS:

268, for filling and closing preformed receptacles as a common fill-close station.

276, for filling and closing preformed receptacles including diverse heads rotatably indexing and progressively acting.

268 With common fill-close stations:

This subclass is indented under subclass 266.1. Apparatus wherein the receptacle is filled and the closure applied at the same station.

- (1) Note. Where there is motion other than infeed between the receptacle and the aperture engaging portion of the fill-close mechanism the apparatus is not considered to be a common fill-close station for this subclass. See subclasses 276+ and 281+ for the locus of such apparatus.

269 Closing mechanism tripped by vented air:

This subclass is indented under subclass 268. Apparatus in which the closure applying means is initiated by air forced out of the receptacle during the filling operation.

270 Closure release by withdrawal of fill means or receptacle:

This subclass is indented under subclass 268. Apparatus wherein a closure is supplied by separation of the fill means and receptacle, one from the other.

271 Unidirectional infeed motion only:

This subclass is indented under subclass 268. Apparatus wherein during the fill-close operation there is no reversal of the relative motion between the mechanism effecting such fill-closing and the receptacle.

272 Turret mounted (plural heads rotatively indexing and progressively acting):

This subclass is indented under subclass 268. Apparatus wherein plural heads rotatively indexing and progressively acting on rotatively conveyed receptacles constitute the common station mechanism.

SEE OR SEARCH CLASS:

141, Fluent Material Handling, With Receiver or Receiver Coating Means, subclasses 144+ for similar machines for filling successive receivers.

273 Swivel or slide relation to receptacle aperture:

This subclass is indented under subclass 268. Apparatus wherein receptacle aperture engaging means includes a reciprocating or oscillating mechanism to alternately present a fill or close device to the receptacle.

- (1) Note. The receptacle aperture engaging means is common to both fill and close devices.

274 Including closure port valve means:

This subclass is indented under subclass 268. Apparatus including means to seal the closure supplying entrance so as to maintain the system pressure or vacuum.

SEE OR SEARCH CLASS:

141, Fluent Material Handling, With Receiver or Receiver Coating Means, subclass 62 for filling machines of this type having closed diverse fluid containing pressure systems, e.g., vacuum or counter-pressure.

275 Closure within or forming wall of pressure chamber:

This subclass is indented under subclass 268. Apparatus wherein a closure is either within or forms a sealing portion of a pressure or vacuum system established during filling of the receptacle.

- (1) Note. Included in this subclass are those devices wherein individual closures are inserted within a fill-close mechanism and the mechanism is then applied to a receptacle for filling and closing the individual receptacle.

276 Diverse heads rotatively indexing and progressively acting (turret):

This subclass is indented under subclass 266.1. Apparatus wherein the fill and close devices are mounted on a common rotatively indexing conveyor.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

272, for turret or indexing conveyor with a common fill-close station.

277 Planetating or epicycle orbit:

This subclass is indented under subclass 276. Apparatus wherein the individual fill and close stations rotate about a common axis which axis in turn rotates about still another axis.

278 Concentric orbits:

This subclass is indented under subclass 276. Apparatus wherein the individual fill and close devices are rotatively indexed about a common axis.

279 Plural axes:

This subclass is indented under subclass 276. Apparatus whereby the fill device is rotatively indexed about one axis and the close device rotatively indexed about another axis.

280 Common infeed means:

This subclass is indented under subclass 279. Apparatus wherein the final positioning of pre-formed receptacles with respect to both a fill and a close device is effected by a single means.

281 With separate closure:

This subclass is indented under subclass 266.1. Apparatus wherein individual fill and close devices are arranged to operate successively upon a receptacle conveyed past said devices, the close device applying a separate closure.

- (1) Note. Included here are mechanisms comprising a turret station associated with a nonturret station.
- (2) Note. Also included here are the mechanisms which handle a plurality of pre-formed receptacles in a case or carton.

282 Endless conveyor for receptacle:

This subclass is indented under subclass 281. Apparatus wherein the means conveying the receptacle is of the endless conveyor type.

283 Common infeed means for fill and close means:

This subclass is indented under subclass 281. Apparatus wherein the means effecting the final juxtapositioning between (1) fill and close devices and (2) the receptacle is common to both fill and close devices.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

280, for similar devices in multiple turret machines.

284 Opposite end closing:

This subclass is indented under subclass 266.1. Apparatus in which a receptacle open at opposite ends has each end operated upon to complete the enclosing of the contents.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

228+, for wrapping apparatus which forms sheet material into an open ended tube and then closes the opposite ends of the tube.

284.2 Receptacle comprising film mount:

This subclass is indented under subclass 266.1. Apparatus wherein the cover includes upper and lower sheets, each having a window through which light may pass to be transmitted through a transparent sheet-like contents member.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

520, for package making, including reshaping of contents, which contents are of film, sheet or weblike material.

284.3 Receptacle comprising envelope:

This subclass is indented under subclass 266.1. Apparatus wherein the cover is comprised of upper and lower planar sheets which, after formation of the package, will engage each other and be united at their perimeters, which cover is intended to receive sheet-like goods.

(1) Note. An “envelope” with a bellows or gusset is not included herein.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

460, for a method of package making wherein the package is an envelope or is closed by a triangular flap fold.

284.4 Means to insert X-ray film into and to close special receptacle:

This subclass is indented under subclass 266.1. Apparatus wherein the cover is intended to contain negative photos:graphic information material.

284.5 Rigid receptacle:

This subclass is indented under subclass 266.1. Apparatus wherein the cover is sufficiently stiff to retain its shape during use.

284.6 Glass receptacle, e.g., ampoule:

This subclass is indented under subclass 284.5. Apparatus wherein the cover is of vitreous or ceramic material which has been solidified directly from the liquid state without crystallization.

(1) Note. A glass ampoule is included herein.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

284.5, for means to fill and close a ceramic package generally, i.e., other than glass.

284.7 Receptacle comprising bag:

This subclass is indented under subclass 266.1. Apparatus wherein the cover is made of generally flexible material, i.e., will not retain its shape when filled with the weight of contents; is generally three dimensional, i.e., has sides and a bottom; and is open at the top before being filled and closed.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

469, for a method of package making comprising filling a preformed, flexible, expandable receptacle and closing it.

285 CLOSING PACKAGES AND FILLED RECEPTACLES:

This subclass is indented under the class definition. Apparatus for completing the enclosure of the contents within a package or receptacle.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

75+, for apparatus having automatic or triggered control of end closing.

169, for apparatus for closing tray and shell type receptacles.

203+, for wrapping machines which form the receptacle and subsequently close it.

476, for corresponding methods.

580+, particularly subclass 200 for apparatus for bringing portions of partial covers into such position as to retain the contents and cover together.

SEE OR SEARCH CLASS:

29, Metal Working, subclass 240 for juxtapositioning and securing of screw type closures on open ended collapsible tubes.

86, Ammunition and Explosive-Charge Making, subclasses 39+ for apparatus to close a cartridge shell by crimping.

100, Presses, subclasses 54+ for presses for applying lids to portable receptacles, not elsewhere provided for.

112, Sewing, subclass 11 for sewing closed filled sacks.

413, Sheet Metal Container Making, subclass 26 for seaming the can body to a respective closure.

286 Plural independently closed covers:

This subclass is indented under subclass 285. Apparatus by which the enclosure of contents within an inner and an outer cover is completed by displacing both covers to enclosing position with at least a portion of at least one of the covers being displaced without displacing any portion of the other cover.

- (1) Note. For the displacing together of both inner and outer covers search this class in the subclass appropriate to the type or types of closure involved.

SEE OR SEARCH THIS CLASS, SUBCLASS:

170+, for apparatus including applying plural covers to contents in addition to closing.

287 Separate closure applying:

This subclass is indented under subclass 285. Apparatus which completes the enclosure of the contents by securing a separate closure member to another cover member or receptacle.

- (1) Note. Included in this and indented subclasses is the assembly of a cap, capsule, cork, cot, crown, disk; stopper or hood closure to an aperture of a bottle, container, jar, or tube.
- (2) Note. Included hereunder is the application of a closure and a superimposed hood or cap at a single station in substantially a single infeed operation.
- (3) Note. Included hereunder is the partial encasement of the neck end of a bottle (whether or not said bottle has been previously corked or capped) by a closure which is conformed to said neck portion.

SEE OR SEARCH THIS CLASS, SUBCLASS:

128.1+, for apparatus which in addition to securing or assembling a separate closure member also applies a contents contacting sealing spot, disk, or gasket; a superimposed disk which depresses a portion of the separate closure member within the aperture of

a receptacle; and/or applies a binding string or wire or a resilient band and/or a staple or clip to fasten the closure member onto the receptacle.

170+, for apparatus to apply two or more separate and distinct closures, said closures being superimposed and applied at separate stations or in substantially distinct sequential operations at the same station.

376.3, for apparatus which completes the enclosure of the contents by displacing a single projecting flap portion of the cover or a hinged lid.

SEE OR SEARCH CLASS:

221, Article Dispensing, appropriate subclasses particularly subclasses 236+, for devices which remove a closure from a magazine and then dispense said closure in a direction normal to the movement from said magazine. Where a claimed disclosure provides for means operated by coercion of a receiver to actuate dispensing manipulating means the patents are classified in this (287) and indented subclasses.

288 Cover to milk can:

This subclass is indented under subclass 287. Apparatus restricted to the assembly of milk can and cover.

- (1) Note. The milk cans and covers are usually being assembled after a washing and/or sterilizing operation, the means for said operation not being claimed.

SEE OR SEARCH THIS CLASS, SUBCLASS:

167, for apparatus combining means to clean milk cans and means to apply the cover to said can.

289 With preliminary receptacle shaping:

This subclass is indented under subclass 287. Apparatus which includes means to modify a receptacle prior to assembly and securing of a closure member.

- (1) Note. The term "modify" includes cutting, crimping and compressing.

290 With preliminary closure shaping and/or treatment:

This subclass is indented under subclass 287. Apparatus which includes means to modify the separate closure member prior to assembly with the receptacle.

- (1) Note. Modification of a separate closure element while said element is contacting the receptacle is not considered a preliminary working for this and indented subclasses.
- (2) Note. Heating or cooling of separate closure members to improve the shaping or adhering qualities of said members has been considered a fugitive preconditioning and placed in subclass 141.
- (3) Note. The compression of inserted closure members, e.g., corks, prior to inserting is not classified here. See subclass 324.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 141, for treatment to improve workability of closure members. See (2) Note.
 324, for compression of corks, etc. See (3) Note.

SEE OR SEARCH CLASS:

- 413, Sheet Metal Container Making, subclasses 1+ for the method of making and assembling cans and lids.
 493, Manufacturing Container or Tube From Paper; or Other Manufacturing From a Sheet or Web, subclasses 162+ for making a container including folding.

291 Unfolding, opening and/or stretching capsules or cots:

This subclass is indented under subclass 290. Apparatus including means to expand, set-up, or further shape a previously formed closure to permit assembly of said closure and a preformed receptacle.

- (1) Note. Included here are devices for applying cellulosic cots to corked bottles, paper or foil hoods to bottles or con-

tainers, and resilient closures to preformed receptacles.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 128.1+, for a device which applies a hood, capsule or cot combined with means to seal or secure a closure.
 580, for devices which apply a partial cover to nonapertured portions of a preformed receptacle.

SEE OR SEARCH CLASS:

- 29, Metal Working, subclasses 235+ for devices which assemble and disassemble resilient articles such as tubes, sleeves, nipples, etc. See the Notes thereto for the locus of other similar art.

292 With suction or blast:

This subclass is indented under subclass 291. Apparatus including pneumatic means which aid in the initial unfolding or opening of the closure member.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 384.1+, and 570+, for pneumatic devices used in opening bag type receivers.

293 Removal from support by receptacle:

This subclass is indented under subclass 291. Apparatus wherein the cot or sheath is stripped onto the preformed receptacle by the receptacle itself.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 313+, for apparatus wherein a closure is selected and assembled by a moving receptacle.

294 Stretcher cammed by receptacle:

This subclass is indented under subclass 293. Apparatus including cot stretching means actuated by wedging action of the receptacle.

295 With cot dispenser or ejector:

This subclass is indented under subclass 291. Apparatus including means to feed or deliver cot or sheath elements.

SEE OR SEARCH CLASS:

221, Article Dispensing, appropriate subclasses for dispensing devices, per se.

296 Cutting and/or shaping means:

This subclass is indented under subclass 290. Apparatus including means to shape and/or sever closure elements prior to assembly with a receptacle.

- (1) Note. Mere severing of a blank from stock material as well as cutting a blank or stock material to a desired shape are found here.
- (2) Note. Cutting or forming of closure elements while said element is in contact with a preformed receptacle is not considered preliminary treatment for this subclass.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

138.2+, for cutting and/or forming of auxiliary securing elements.

SEE OR SEARCH CLASS:

83, Cutting, appropriate subclasses for pertinent subclass(es) as determined by schedule review.

297 Concentric with or at infeed of closure:

This subclass is indented under subclass 296. Apparatus wherein cutting and/or forming means operate during infeed of a closure element to a receptacle, or cutting and forming means are substantially co-axial with the line of infeed.

- (1) Note. Included in this subclass, for example, is a single station operation combining a cutting and/or forming as well as an assembly operation. A multiple station set up is to be found in subclass 296.

298 Blank cut-off only:

This subclass is indented under subclass 297. Apparatus wherein preliminary shaping is limited to a mere separation of blank from stock material.

299 Receptacle delivery by case or row:

This subclass is indented under subclass 287. Apparatus including means to position or convey receptacles in aligned groups or ranks to apply separate closure.

- (1) Note. Included here are positioning or conveying means which handle the crate or box within which the preformed receptacles are already placed.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

281+, for devices which handle receptacles by case or row combined with filling and closing operations.

SEE OR SEARCH CLASS:

141, Fluent Material Handling, With Receiver or Receiver Coacting Means, for filling systems having supply means for successive receivers in crates or trays.

198, Conveyors: Power-Driven, subclasses 418+ for a system of plural conveyors having means for establishing and moving a group of items, and subclasses 434+ for a system of plural conveyors having means for arranging or rearranging a stream or streams of items.

300 With receptacle support and/or feed by shoulder engagement:

This subclass is indented under subclass 287. Apparatus including means to position, transport or convey receptacles by embracing or partially embracing a neck or flange portion of said container.

- (1) Note. Included here are devices which position or convey bottles by grasping the neck portion or the flange immediately adjacent the bottle aperture.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

367, for devices which align or center receptacles by engagement with a neck or flange portion.

SEE OR SEARCH CLASS:

294, Handling: Hand and Hoist-Line Implements, subclasses 27.1+ for receptacle lifters.

301 Receptacle delivery to alternately acting headers:

This subclass is indented under subclass 287. Apparatus including means which convey or position receptacles with respect to one and then the other of two closure applying devices acting in turn one after the other.

302 Sequentially acting plural headers:

This subclass is indented under subclass 287. Apparatus including three or more closure applying and/or securing members acting successively and progressively.

- (1) Note. Included here are devices wherein the plural headers are either rotatively indexing or moving in a straight line during closure application.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

272, for common fill-closed station devices with plural heads rotatively indexing and progressively acting, and subclass 276 for separate fill and closed stations with diverse heads rotatively indexing and progressively acting.

SEE OR SEARCH CLASS:

29, Metal Working, subclasses 35.5+ for turret structure and see search notes thereunder.

303 In vertical orbit:

This subclass is indented under subclass 302. Apparatus wherein the plural headers are rotatively indexed about a horizontal axis.

SEE OR SEARCH CLASS:

141, Fluent Material Handling, With Receiver or Receiver Coacting Means, subclass 163 for horizontal axis conveyors for successive receivers in filling systems.

304 With single closure supply stack for headers:

This subclass is indented under subclass 302. Apparatus including a single cap, cork, hood or disc delivery means cooperating with all the headers.

- (1) Note. See Class 221, Article Dispensing, Glossary, under definition of terms used for the definition of the term "stack".

SEE OR SEARCH THIS CLASS, SUB-CLASS:

306, through 312, for similar delivery means in conjunction with single headers.

SEE OR SEARCH CLASS:

221, Article Dispensing, appropriate subclasses, for article dispensing, per se.

305 By hand operation with magazine supply:

This subclass is indented under subclass 287. Devices including a manually operated means for removing a closure from a source of supply and applying said closure to a receptacle.

- (1) Note. The force of actuation for devices in this subclass is the resultant of hand applied force and receptacle reaction to said hand applied force.
- (2) Note. See the reference to Class 221 under the search notes to subclass 680.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

363, for closure securing means including a die with a handle.

306 Closure delivery from supply into or below bottom of header:

This subclass is indented under subclass 287. Apparatus including means to position or place a closure member within or immediately adjacent and coaxial with the bottom of the closure applying means.

- (1) Note. The bottom or lower portion of the closure applying device is considered to be that portion facing or immediately adjacent the receptacle during the applying or conforming infeed motion.

- (2) Note. Closure supporting means in relatively fixed position immediately adjacent or contacting the bottom of the applying means, coaxial with said applying means, are considered to be a portion of the header for purposes of this subclass.
- 307 Closure delivery into inverting header:**
This subclass is indented under subclass 306. Apparatus wherein subsequent to positioning or placing of a closure member within the bottom of a header said header is swiveled or relatively rotated about an axis transverse to the line of infeed so as to align the closure held coaxial with the line of infeed.
- 308 Turret supporting closure below header:**
This subclass is indented under subclass 306. Apparatus wherein a closure member is positioned or conveyed into alignment below the bottom of a header by means of an indexing dial or plate.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
302+, for closure member support means of the turret or indexing dial type combined with sequentially acting plural headers.
- SEE OR SEARCH CLASS:
221, Article Dispensing, subclasses 289+ for gravity feed with release mechanism and subsequent manipulation, and subclasses 236+ for gravity feed with discharge assistant and subsequent manipulation.
- 309 Closure delivery from supply through top of header:**
This subclass is indented under subclass 287. Apparatus including means to position or convey a closure member into or within a closure applying and securing member from a source above said applying member, the closure member being moved or translated within the applying member along the line of infeed.
- (1) Note. Included here are devices wherein the closure member is inverted or obverted during its passage through closure applying member.
- 310 Closure delivery from supply laterally into header:**
This subclass is indented under subclass 287. Apparatus including means whereby a closure element is separated from a source of elements and positioned or conveyed into the side of a closure applying member.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
274, for filling and closing preformed receptacle at a common fill-close station including cap port valve means, associated with lateral insertion of a closure element into a header.
301, for lateral feed of closure elements into header in apparatus where receptacles are delivered to alternately acting headers.
302, for sequentially acting plural headers with closure feed laterally into header.
- 311 Closure at infeed normal to closure in stack:**
This subclass is indented under subclass 310. Apparatus wherein a closure element positioned in the header, immediately prior to assembly with a receptacle, is in a plane transverse to the plane said closure is in while within the supply chute or column.
- (1) Note. Where a supply chute curves so as to vary the plane within which the closure element lies, such supply chute has been considered properly classifiable with the art in this subclass. Generally, though not exclusively, this subclass provides for those closure applying devices wherein a crown or cap type of closure is fed from a hopper by means of a gravity chute into the side of a header, the crowns or caps being arranged within the hopper in an edge-to-edge abutment rather than a face-to-face relation as usually found in subclass 310.
- 312 Horizontal infeed:**
This subclass is indented under subclass 310. Apparatus wherein a closure member and receptacle are moved with respect to each other along a horizontal line to effect assembly.

313 Closure selected by moving receptacle:

This subclass is indented under subclass 287. Apparatus wherein a closure member is contacted by a receptacle moving relative to said closure, the continued relative motion of the receptacle and the closure contacted thereby effecting a separation or removal of said closure member from a supply.

- (1) Note. The supply may consist of an inclined chute containing closure members or a vertical stack of nested closures.
- (2) Note. Included here are devices which move closures from a first supply to a second supply from which second supply said closures are stripped by a receptacle.

SEE OR SEARCH THIS CLASS, SUBCLASS:

67, for apparatus wherein a cap is selected by a moving receptacle including means providing for a preliminary release for feed of closure members responsive to either presence or absence of a receptacle and/or a closure member.

314 With subsequent securing:

This subclass is indented under subclass 313. Apparatus including means to fasten a stripped or separated closure resting on a receptacle to said receptacle.

SEE OR SEARCH THIS CLASS, SUBCLASS:

317+, and 329+, for closure securing means, per se.

315 With wiper or leveler means:

This subclass is indented under subclass 313. Apparatus including means to maintain the position of the closure member on a receptacle as said closure leaves the supply and/or means to tilt or pivot a closure member into a substantially horizontal position on a receptacle as said closure leaves the supply.

- (1) Note. Included here are devices wherein the wiper or leveler means consists of a

spring like lever, a pivoted lever, or a length of articulated chain.

316 Roller:

This subclass is indented under subclass 315. Apparatus wherein the wiper or leveler means is a rotatable cylindrical or wheel-like element.

317 Screw or lug closure applying means:

This subclass is indented under subclass 287. Apparatus including devices which first position a separate closure member on a receptacle and then secure said closure by relative rotation with respect to said receptacle.

- (1) Note. The relative rotation of the closure and receptacle effects an interengagement of threads or similar projections.
- (2) Note. Juxtaposing of closure and receptacle may be either by means of the same instrumentality which effects the relative rotation or by means of a separate instrumentality.

SEE OR SEARCH THIS CLASS, SUBCLASS:

304, through 313, for various devices under the class definition including means for supplying or providing a closure member for an assembling head or chuck.

331, for devices which secure a separate closure member on a receptacle by both interthread engagement and crimping (or shaping) portions of the closure member into engagement with the receptacle.

331.5, for securing devices, which effect relative rotation between a receptacle and a closure already on the receptacle, including means to convey or feed the so partially assembled closure and receptacle to the securing means.

SEE OR SEARCH CLASS:

7, Compound Tools, subclasses 151+ for receptacle closure removing implements attached to screw closure applying tools.

29, Metal Working, subclass 240 for apparatus utilizing rotational means for assembly and disassembly.

- 81, Tools, subclasses 3.1+ for devices which rotate a closure with respect to a receptacle either to tighten or loosen the closure, the partially or wholly assembled closure and receptacle being presented to the device by hand, and subclasses 53+ for wrenches of general utility.
- 318 With reverse rotation means:**
This subclass is indented under subclass 317. Apparatus wherein the cycle of operation includes rotating a closure member relative to a receptacle in one direction and then in the other direction.
- (1) Note. Included here are devices which operate on a receptacle and a previously placed or juxtaposed closure member, inasmuch as the reverse rotation is considered an assembling operation rather than a mere tightening or loosening for Class 81, subclasses 3.1+.
- (2) Note. Included here are devices wherein a reverse rotation is for the disclosed, but unclaimed, purpose of facilitating filling or evacuating a receptacle.
- 319 Closure inserting means:**
This subclass is indented under subclass 287. Apparatus wherein a closure member is placed within the aperture of a preformed receptacle.
- (1) Note. Included here are devices which juxtapose the closure member and the preformed receptacle and then secure said closure in the receiver aperture.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
329+, for closure securing means, per se, and particularly subclass 330 for means which secure a closure internally of a preformed receptacle.
- 320 With vent means:**
This subclass is indented under subclass 319. Apparatus including means providing for the escape of contents displaced by closure insertion.
- (1) Note. Ordinarily the displaced contents consists of air in the upper portion of a receptacle.
- 321 Closure flexing means (straightening or buckling):**
This subclass is indented under subclass 319. Apparatus including means whereby the straightening and/or buckling of portions of a closure member inserted within the aperture of a preformed receptacle serves to engage the sides of said aperture, either merely frictionally or by interlock with receptacle projections, thereby securing said closure member.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
359+, for filler or forcer die means which distort or shape portions of the closure member to secure said closure to the receptacle.
- 322 With closure guide withdrawal means:**
This subclass is indented under subclass 319. Apparatus including means to retract the means directing a closure member into a receptacle.
- 323 Receptacle push-off means:**
This subclass is indented under subclass 322. Apparatus wherein retraction means bear directly on a receptacle.
- SEE OR SEARCH CLASS:
141, Fluent Material Handling, With Receiver or Receiver Coating Means, subclass 281 for means for positively separating a filled receptacle from the filling head or from its support.
- 324 Closure compressing means:**
This subclass is indented under subclass 319. Apparatus including means to compact or resiliently distort a closure member during and/or immediately prior to inserting in a preformed receptacle.
- (1) Note. Included here are devices with simple taper or bell shape dies through which a closure element is forced to compress said closure member.

- 325 Roller:**
This subclass is indented under subclass 324. Apparatus wherein compacting means include a rotary cylindrical element bearing against the closure member.
- 326 Sliding segment die:**
This subclass is indented under subclass 324. Apparatus wherein compacting means include a split die, one portion of which is radially reciprocable to impart a compressing force.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
353, for conforming dies with radially reciprocating jaws.
- 327 Pivoted segment die:**
This subclass is indented under subclass 324. Apparatus wherein at least one element of a split die oscillates in an arcuate path to effect the compression.
- 328 Plunger structure:**
This subclass is indented under subclass 319. Apparatus including details of means moving a closure member along the line of infeed.
- (1) Note. Included here are devices with plunger structure wherein the plunger is made up of a plurality of relatively movable elements.
- 329 Closure securing means:**
This subclass is indented under subclass 287. Apparatus including means to fasten, shrink, wipe, crimp or conform a closure member onto a receptacle.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
128.1+, for a device which secures a closure member on a receptacle by means of an auxiliary securing element rather than by merely deforming the closure member itself or a portion thereof.
314, for devices wherein a closure selected by a moving receptacle is subsequently secured to said receptacle.
317+, for devices which secure a closure member on a receptacle by thread engagement.
- 329.2 Heated securing means:**
This subclass is indented under subclass 329. Apparatus including provision to apply thermal energy to the means to fasten, shrink, wipe, crimp or conform a separate closure member.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
478, for a method of package making including closing a package and heat sealing a separate closure thereon.
- 329.3 Adapted to engage flange (e.g., outturned seam) of package cover:**
This subclass is indented under subclass 329.2. Apparatus in which opposing edges of the closure project beyond the contents, wherein said means engages the projecting edges and completes the enclosure by bringing the opposing inwardly facing surfaces of the opposing edges together in face-to-face, e.g., abutting, relationship.
- 329.4 With means to advance package during securing:**
This subclass is indented under subclass 329.3. Apparatus combined with structure to cause the filled package to move as the enclosure is secured while engaged by the securing means.
- 329.5 With means to trim excess cover:**
This subclass is indented under subclass 329.3. Apparatus combined with structure to remove any unwanted portion of the cover of the package.
- 330 Internal:**
This subclass is indented under subclass 329. Apparatus wherein a closure member is secured within the aperture of a preformed receptacle by shaping or distorting portions of said closure member so as to engage the inner surface of said aperture.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
319+, for devices which secure a closure within the aperture of a preformed receptacle by compressing said closure member prior to or during insertion.

331 Thread and crimp:

This subclass is indented under subclass 329. Apparatus including means to secure a closure member by interengagement of projections on both closure and receptacle by relative rotation plus a reshaping or distortion of a portion of the closure member to conform to or embrace the receptacle.

- (1) Note. The combination of means (1) to interengage the threads or lugs of a closure and a receptacle by relative rotation and means (2) which deform a portion of the closure member simultaneously or subsequent to such interthread engagement is considered beyond the scope of Class 81, subclasses 3.1+ and such art is here classified.

SEE OR SEARCH THIS CLASS, SUBCLASS:

317+, for screw or lug closure applying means, per se, and subclasses following this subclass (331) for closure securing by means of reshaping or distorting portion of the closure member.

331.5 Screw or lug type:

This subclass is indented under subclass 329. Apparatus including means to rotate closure and receptacle relative to each other so as to interlock the threads or projections carried by one with the threads, projections or apertures carried by the other.

- (1) Note. Included here are devices with means to convey or feed a receptacle supporting a closure to and/or from the securing mechanisms.

SEE OR SEARCH THIS CLASS, SUBCLASS:

317+, for means which juxtapose or position a screw type closure and receptacle as well as secure one to the other.

331, for means to secure a closure both by rotation and deformation.

SEE OR SEARCH CLASS:

81, Tools, subclasses 3.1+ for devices which rotate a closure with respect to a receptacle either to tighten or loosen

the closure; the partially or wholly assembled closure and receptacle being presented to the device by hand.

332 Reverse closure flexing or turn-back means:

This subclass is indented under subclass 329. Apparatus wherein a tubular portion of a closure member, extending above the opening of a receptacle, is inverted so as to embrace the external neck portion of said receptacle.

- (1) Note. Included here are means for doubling back the upper portion of a rubber stopper, which doubled back portion serves to cover and protect the opening of the bottle.

333 Repeated on different portions of same closure:

This subclass is indented under subclass 329. Apparatus wherein plural conforming operations are performed sequentially on adjacent sections of a closure member.

- (1) Note. The plural operations performed on the closure member may be effected by the same conforming element or by separated conforming elements.
- (2) Note. The simultaneous shaping or conforming of adjacent sections of a closure member is not classified here. Such art is classified on the basis of the particular shaping operation.

334 Rotary tool or die:

This subclass is indented under subclass 329. Apparatus wherein a closure shaping or conforming element is moved or movable about an axis during application to a closure member.

SEE OR SEARCH THIS CLASS, SUBCLASS:

79+, for head seaming devices of the rotary tool type in combination with means to vacuumize; the seaming device is usually within a vacuum chamber.

SEE OR SEARCH CLASS:

72, Metal Deforming, subclasses 48+ for disclosure of seaming by pressure.

413, Sheet Metal Container Making, subclasses 31+ for roller die seaming means.

335 With centrifugal means:

This subclass is indented under subclass 334. Apparatus wherein a rotary tool or die is brought to bear against a closure member as a result of forces set up by the rotation of said tool or die.

336 Cam release:

This subclass is indented under subclass 335. Apparatus wherein a configured projection is brought to bear on a rotary tool or die holder so as to counteract the action of centrifugal force.

337 Centrifugal release:

This subclass is indented under subclass 335. Apparatus wherein centrifugal force restores a rotary tool or die to an initial position permitting removal or insertion of a closure member.

338 Planetating:

This subclass is indented under subclass 334. Apparatus wherein a conforming tool or die rotates about an axis which axis is rotating about the line of infeed.

339 Axially rocking:

This subclass is indented under subclass 338. Apparatus wherein a tool or die element is oscillated about an axis normal to the line of infeed during shaping of a closure member.

340 Radial, rocking or axial pivot:

This subclass is indented under subclass 338. Apparatus wherein a tool or die element oscillates about an axis parallel to the line of infeed during shaping of a closure member.

SEE OR SEARCH THIS CLASS, SUBCLASS:

349, through 355, and subclass 344 for sectional die means including various mechanical movements effecting such oscillation.

SEE OR SEARCH CLASS:

413, Sheet Metal Container Making, subclasses 31+ for roller die seaming means.

341 Die:

This subclass is indented under subclass 329. Apparatus wherein a closure conforming or shaping means consists of a hollow internally

configured tool, the movement or relative movement of said tool and a closure element effecting the desired shaping or deforming of said closure element.

SEE OR SEARCH CLASS:

100, Presses, subclasses 295+ for presses having a pressure surface and see the search notes thereunder for the locus of pressure surfaces utilized to shape material.

342 With closure support:

This subclass is indented under subclass 341. Apparatus wherein a closure conforming member includes means to position or hold a closure element immediately prior to assembly with a receptacle.

(1) Note. Mere frictional engagement between a closure element and a conforming die member to support said closure element is not considered a support means for this subclass.

SEE OR SEARCH THIS CLASS, SUBCLASS:

304, through 312, for closure delivery means combined with closure support means.

343 Magnetic:

This subclass is indented under subclass 342. Apparatus wherein a closure is supported or held by means of a permanent or electromagnet.

344 Sectional:

This subclass is indented under subclass 342. Apparatus wherein a closure conforming or shaping member comprises two or more elements.

(1) Note. The individual elements constituting the closure shaping member may act independent of each other or together as a unit.

(2) Note. The subclasses indented hereunder are subdivided on the basis of the mechanical movement or actuation necessary to effect closure conforming or shaping. Similar apparatus which serves to merely release the die sections after

conforming of the closure member involves a search of all the subclasses indented hereunder.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

330, for sectional dies used to conform inserted closure members.

334, for sectional dies that rotate during closure conforming.

SEE OR SEARCH CLASS:

72, Metal Deforming, subclasses 409.01+ for disclosure of a plier type tool usable in severing a closure.

279, Chucks or Sockets, appropriate subclasses for segmental gripping devices.

413, Sheet Metal Container Making, subclasses 31+ for roller die seaming means.

451, Abrading, subclass 487 for a carrier for a radially movable abrading tool.

345 **With resilient faces:**

This subclass is indented under subclass 344. Apparatus wherein the individual die elements are provided with bearing or working surfaces of an elastic or yieldable nature.

(1) Note. The resilient face is either a continuous annulus or sectional in form.

346 **Split or two part die:**

This subclass is indented under subclass 345. Apparatus wherein the resilient or yielding face is affixed to, or associated with, a sectional die limited to two elements.

347 **Helical spring:**

This subclass is indented under subclass 345. Apparatus wherein the resilient face consists of a wire coil.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

358, for dies consisting of a helical spring annulus.

348 **Fluid pressure actuated:**

This subclass is indented under subclass 344. Apparatus wherein the individual die elements are actuated in response to the exertion of a

hydraulic or pneumatic force against said elements.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

361, for fluid pressure distorted filler or forcer.

349 **Rotary cam:**

This subclass is indented under subclass 344. Apparatus wherein the individual die members are urged or pressed against the closure member by the curved surface of a member rotatable about the infeed axis.

350 **Toggle:**

This subclass is indented under subclass 344. Apparatus wherein the individual die elements are actuated by the change in alignment of the several members making up a multi-link lever system.

351 **Axial cam:**

This subclass is indented under subclass 344. Apparatus wherein the individual die elements are actuated to shape or form the closure member by direct or indirect contact with projection of definite shape as a result of relative motion with respect to said projection along the line of infeed.

SEE OR SEARCH CLASS:

279, Chucks or Sockets, appropriate subclasses under subclasses 9.1+ for socket type devices using an axial cam actuator.

352 **Convex:**

This subclass is indented under subclass 351. Apparatus wherein the mating engaging bearing for the working cam surface is curved or rounded as the exterior of a sphere.

353 **Radially reciprocating jaws:**

This subclass is indented under subclass 351. Apparatus wherein the die elements move in a path normal to the infeed motion.

SEE OR SEARCH CLASS:

279, Chucks or Sockets, subclasses 66+ for socket type chucks including radially reciprocating jaws.

354 Bell crank:

This subclass is indented under subclass 344. Apparatus wherein an axial or infeed motion against one end of an intermediate lever causes said intermediate lever to pivot thereby actuating individual die shaping elements.

- (1) Note. Included here are those devices wherein the intermediate lever slides along the arc of a circle to effect motion of the die elements.
- (2) Note. Force applied to an intermediate lever along a line other than an axial or infeed is considered to be a cam action for subclass 351.

355 Biased for deformation:

This subclass is indented under subclass 344. Apparatus wherein the individual element constituting the die are resiliently urged to resist passage of a closure member, thereby deforming said closure member onto a receptacle.

- (1) Note. The bias or resiliency imparted to the die elements is the result of separate springlike elements applied against said die elements.

356 Split or spring collet type:

This subclass is indented under subclass 344. Apparatus wherein the sectional die element itself is made of a spring or resilient material and divided or partially severed lengthwise on one or more sides forming yieldable fingers whereby the inserted closure may be shaped or conformed.

SEE OR SEARCH CLASS:

279, Chucks or Sockets, subclasses 46.1+ for split or spring collect chucks.

357 Resilient annulus:

This subclass is indented under subclass 341. Apparatus wherein the conforming member consists of a yieldable medium in the general shape of a torus or band, which torus or band is rolled or wiped over the closure element during infeed.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

220, for wrapping apparatus in which the bending of the cover material is effect-ed by motion of a blank and contents through a confining space or passage.

358 Helical spring:

This subclass is indented under subclass 357. Apparatus wherein the torus member is a yielding wire spring coil.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

347, for sectional dies utilizing a helical spring coil as a face member.

359 Filler or forcer:

This subclass is indented under subclass 341. Apparatus wherein the die or conforming member consists of a substantially incompressible resilient medium.

SEE OR SEARCH CLASS:

100, Presses, subclass 211 for presses utilizing a deformable platen; also see search notes thereunder for the locus of such art.

360 Reverse flex of resilient element:

This subclass is indented under subclass 359. Apparatus wherein the bending of a yieldable medium counter to its original configuration serves to embrace the closure element and shape it onto the receptacle.

361 Fluid pressure or resilient element:

This subclass is indented under subclass 359. Apparatus wherein the resilient medium, subjected to hydraulic or pneumatic pressure, is distorted against the closure element to shape same.

- (1) Note. Included here are devices wherein a resilient membrane-like member, generally conforming to the shape of the upper portion of a bottle, is forced into intimate contact with said bottle by means of fluid pressure; thereby conforming a cot or hood placed over the bottle to said bottle top.

- SEE OR SEARCH THIS CLASS, SUB-CLASS:
348, for fluid pressure actuated sectional dies.
- 362 Confined elastomer block:**
This subclass is indented under subclass 359. Apparatus wherein the shaping medium is so restricted that force applied at one portion of said medium effects a distortion elsewhere to shape the closure element.
- SEE OR SEARCH CLASS:
100, Presses, subclass 211 and see search notes thereunder for presses in which one of the pressure surfaces is bendable.
- 363 With handle:**
This subclass is indented under subclass 341. Apparatus wherein the die or closure element is provided with a hand grip for application and/or actuation of the die element.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:
305, for closure applying by hand operation with magazine supply.
- SEE OR SEARCH CLASS:
7, Compound Tools, subclasses 151+ for hand cappers combined with receptacle closure remover.
81, Tools, subclasses 3.34+ for hand manipulated types of receptacle closure removers.
- 364 Second class lever mounted:**
This subclass is indented under subclass 341. Apparatus wherein the die is mounted intermediate a pivot point and a force applying point of co-acting levers one of which carries the die, the other cooperating lever grasping or positioning the receptacle.
- SEE OR SEARCH CLASS:
100, Presses, subclass 293 for fixed fulcrum lever devices.
- 365 Toggle mounted:**
This subclass is indented under subclass 341. Apparatus wherein the die or conforming member is so mounted on a linkage that infeed
- with respect to a receptacle by said die is effected by moving a lever linked to said linkage so as to bring the linked elements of said linkage into line or past said alignment.
- (1) Note. Included here are devices wherein the actuation of the toggle mechanism grasps the receptacle as well as effects the infeed motion.
- 366 By crimping of receptacle:**
This subclass is indented under subclass 329. Apparatus wherein a closure is retained or secured in assembled position by a deformation of the receptacle or package cover material.
- 367 Orienting or aligning means:**
This subclass is indented under subclass 287. Apparatus including means providing for the proper juxtaposing of receptacle and closure.
- SEE OR SEARCH CLASS:
141, Fluent Material Handling, With Receiver or Receiver Coating Means, subclass 165 for conveyor associated centering means for receivers in fluid material filling systems supplying successive receivers; subclasses 370+ for receiver guides and shields in filling systems generally.
198, Conveyors: Power-Driven, subclasses 373+ for a conveyor having means for changing the attitude of the conveyed load relative to the conveying direction.
- 368 With height compensating means and/or package ejection means:**
This subclass is indented under subclass 287. Apparatus including (1) some form of yielding, resilient or adjustable means permitting variations between the final position of closure head and receptacle support during infeed and/or (2) means to assist the gravity removal of a completed package from the closure head.
- (1) Note. The claimed recitation of a closure head, capping head, die, throat, tapered throat, and the like without further recitation of structural detail for said closure applying element has been deemed insufficient to warrant classification in subclasses 341+ and, where otherwise

coming within the scope of the above definition, has been here classified.

- (2) Note. Included here are devices which provide for compensating means in the closure head or die-structure as well as compensating means in the receptacle support.
- (3) Note. The mere yielding of a plunger to provide an ejection means for the assembled closure and receptacle is not necessarily a variable height compensating means, and such mechanism not in fact providing for height deviation is to be found in subclass 369.

SEE OR SEARCH CLASS:

- 100, Presses, subclass 214 for reciprocating press structure which functions similarly to provide a constant force or pressure.
- 141, Fluent Material Handling, With Receiver or Receiver Coating Means, subclass 177 for filling systems supplying successive receivers and having filling nozzle, guide or conveyor adjustable to receiver size; subclasses 266 and 378+ for adjustable supports for receivers; subclasses 176 and 281+ for means for discharging filled receivers from their support in a filling system.

369 With package ejection means only:

This subclass is indented under subclass 368. Apparatus limited to devices which include means to eject or remove the completed package from the closure applying head.

370 Twisters:

This subclass is indented under subclass 285. Apparatus for rotating a tubular projecting end portion of the cover relative to the contents contacting portion of the cover so as to cause the projecting portion to be collapsed inwardly to contents enclosing position.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 181, for closing a progressively seamed web between package units by twisting.

- 217, for wrapping apparatus in which a cinched or wiped around cover is closed by end twisting.
- 227, for wrapping apparatus in which an initial pouch shape is closed by twisting.

SEE OR SEARCH CLASS:

- 493, Manufacturing Container or Tube From Paper; or Other Manufacturing From a Sheet or Web, subclasses 183+ for making a rigid container including closing the end of a tube by folding end flaps; subclasses 260+ for making a pliable container including folding end flaps; and subclass 308 for apparatus to close the end of a tube, e.g., by twisting.

370.2 Including provision for pleat of cover overhang:

This subclass is indented under subclass 285. Apparatus by which portions of the cover material extending beyond the contents are turned inwardly with the formation of a tuck or gusset.

- (1) Note. This subclass is intended to include package making apparatus wherein a pleat is merely disclosed as a part of the completed package, i.e., a showing of a pleat on the completed package in the drawings is sufficient to cause a package making apparatus to be included in this and the indented subclasses.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 373.2+, for means to engage an outturned seam of a package cover in making a package, wherein there is no disclosure of formation of a pleat.

370.3 With means to apply adhesive:

This subclass is indented under subclass 370.2. Apparatus combined with structure to supply bonding material to the cover of the package.

370.4 With means to trim excess cover:

This subclass is indented under subclass 370.2. Apparatus combined with structure to remove any unwanted portion of the cover of the package.

370.5 And means to advance package during closing:

This subclass is indented under subclass 370.4. Apparatus including structure to cause the filled package to move as enclosure is completed while engaged by the enclosure completing means.

370.6 With means to engage cover at spaced points and move together to form pleat:

This subclass is indented under subclass 370.2. Apparatus including a first member to engage the filled package at a first location and a second member to engage the filled package at a second location and including provision to effect relative motion of the two members toward each other to effect formation of a gusset.

370.7 With means to heat or cool seam:

This subclass is indented under subclass 370.2. Apparatus in which means is provided to apply or remove thermal energy from engaging surfaces of the cover.

SEE OR SEARCH THIS CLASS, SUBCLASS:

373, for apparatus having means to apply or remove heat from an outturned seam without a pleat, and see the notes thereto for heat sealing elsewhere classified.

479, for a method of closing a preformed nonfreestanding container by heat sealing.

SEE OR SEARCH CLASS:

219, Electric Heating, for heating by electrical resistance, especially subclasses 59.1+ and 78.16, respectively, for heating a metal tube by the use of electrically generated heat, and subclasses 603+ for inductive heating of metal tubes.

370.8 Spaced from cover during heating or cooling:

This subclass is indented under subclass 370.7. Apparatus wherein the means to apply or remove thermal energy is out of contact with the surfaces of the cover being treated.

370.9 Comprising means to force heated fluid to contact cover:

This subclass is indented under subclass 370.8. Apparatus including means to supply thermal energy by driving a flowable medium directly into engagement with the surface of the cover that is being treated.

SEE OR SEARCH THIS CLASS, SUBCLASS:

370.8, for closing a package or filled receptacle with means to heat by radiant energy.

371.2 Having nonplanar sealing surface:

This subclass is indented under subclass 370.7. Apparatus wherein the means to supply or remove thermal energy has a surface that is other than flat along the full length of the seam.

371.3 With means to advance package during closing:

This subclass is indented under subclass 370.7. Apparatus including structure to cause the filled package to move as enclosure is completed while engaged by the enclosure completing means.

371.4 Closing means comprising roller or roller-like member:

This subclass is indented under subclass 371.3. Apparatus wherein the means to close the package or filled receptacle turns about an axis and engages with its radially outwardly-facing radial extremity with rolling engagement.

371.5 Closing means moving with package during closing:

This subclass is indented under subclass 371.3. Apparatus wherein the means to complete the enclosure travels in the same direction as the package during its operation.

371.6 And moving perpendicularly to package movement during closing:

This subclass is indented under subclass 371.5. Apparatus wherein the means to complete the enclosure also travels normally to the direction of package travel as it functions.

371.7 Including provision for pleat and fold of cover:

This subclass is indented under subclass 371.3. Apparatus by which portions of the cover material extending beyond the contents are pleated and subsequently folded.

371.8 With package stationary during closing:

This subclass is indented under subclass 370.7. Apparatus wherein the package is motionless as enclosure is completed.

371.9 Pivoted means to close cover:

This subclass is indented under subclass 371.8. Apparatus wherein the means to complete the enclosure turns about an axis to function.

372.2 Including provision for pleat and fold of cover:

This subclass is indented under subclass 371.8. Apparatus by which portions of the cover material extending beyond the contents are pleated and subsequently folded.

372.3 Means to cool seam:

This subclass is indented under subclass 370.7. Apparatus in which the means is provided to remove thermal energy from engaging surfaces of the cover.

372.4 With means to advance package during closing:

This subclass is indented under subclass 370.2. Apparatus including structure to cause the filled package to move as enclosure is completed while engaged by the enclosure completing means.

372.5 Including provision for pleat and fold of cover:

This subclass is indented under subclass 372.4. Apparatus by which portions of the cover material extending beyond the contents are pleated and subsequently folded.

372.6 With package stationary during closing:

This subclass is indented under subclass 370.2. Apparatus wherein the package is motionless as enclosure is completed.

372.7 Including provision for pleat and fold of cover:

This subclass is indented under subclass 372.6. Apparatus by which portions of the cover material extending beyond the contents are pleated to closure and subsequently folded.

372.8 To serially pleat cover overhang:

This subclass is indented under subclass 370.2. Apparatus by which at least three adjacent portions proceeding around the package in a single direction are tucked successively.

SEE OR SEARCH CLASS:

493, Manufacturing Container or Tube From Paper; or Other Manufacturing From a Sheet or Web, subclasses 156+ and 183+ for closing the end of a tube by folding over the material in a manner to sequentially form overlapping flaps.

372.9 Including means to rotate package or pleating means during pleating:

This subclass is indented under subclass 372.8. Apparatus having means to support the cover and contents against gravity and to cause said cover and contents to move about an axis passing through the contents, thereby presenting successive portions of the cover to the tucking apparatus; or having means to support the cover and contents against gravity and to cause said cover and contents to be stationary; and further having means to cause the tucking apparatus to move about an axis passing through the contents, thereby presenting successive portions of the cover to the tucking apparatus.

373.2 By means adapted to engage outturned seam of package cover:

This subclass is indented under subclass 285. Apparatus wherein opposing surfaces of the cover project beyond the contents, and wherein enclosure is completed by bringing the opposing inwardly facing surfaces together in face-to-face, i.e., abutting, relationship.

- (1) Note. In the apparatus of this subclass, there is no disclosed formation of a tuck or gusset.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

229, for apparatus for making an initial U-fold and then forming an outturned longitudinal seam.

370.2+, for apparatus for closing a package or a filled receptacle including provision for a disclosed formation of a pleat, i.e., a tuck or a gusset.

481+, for corresponding methods.

373.3 With means to apply adhesive to seam:

This subclass is indented under subclass 373.2. Apparatus combined with structure to supply bonding material to the cover of the package in the vicinity of engagement of the opposing faces.

(1) Note. Adhesive may be applied either before or after closure.

(2) Note. Adhesive may serve to hold the fold down.

373.4 With means to trim excess from cover:

This subclass is indented under subclass 373.2. Apparatus in which a portion of projecting cover material unnecessary to the enclosure is removed by severing.

373.5 With means to advance package during closing:

This subclass is indented under subclass 373.4. Apparatus including structure to cause the filled package to move as enclosure is completed while engaged by the enclosure completing means.

373.6 With means to engage cover at spaced points and move apart to flatten seam:

This subclass is indented under subclass 373.2. Apparatus including a first means to contact the projecting portion of the cover at a first location and including means to engage the projecting portion of the cover at a second location, including provision to effect movement of the means away from each other to draw the walls of the opening defined by the projecting portions together in planar form.

373.7 With means to heat or cool seam:

This subclass is indented under subclass 373.2. Apparatus having means to apply to or remove from the "opposing surfaces" thermal energy.

(1) Note. The abutting faces of the cover may be heated to seal the seam or may be cooled to cause the setting of adhesive previously applied thereto.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

127, for apparatus for packaging with means to heat or cool the contents.

370.7, for apparatus for applying heat to or removing heat from a pleated cover overhang.

376.6, for apparatus for applying or removing heat from a multiple flap closure seam.

380.4, for flap holders having heating or cooling means.

463, for methods of encasing involving heat sealing.

477, for methods of heat sealing closure seams.

479, for a method of closing a preformed nonfreestanding container by heat sealing.

SEE OR SEARCH CLASS:

219, Electric Heating, subclasses 200+ for electric heaters, per se, for heating cover seams.

373.8 Spaced from cover during heating or cooling:

This subclass is indented under subclass 373.7. Apparatus wherein the means to apply or remove thermal energy is out of contact with the surfaces of the cover being treated.

373.9 Comprising means to force heated fluid to contact cover:

This subclass is indented under subclass 373.8. Apparatus wherein thermal energy is supplied to or removed by a flowable medium directed into engagement with the surfaces of the cover that are being treated.

- SEE OR SEARCH THIS CLASS, SUB-CLASS:
373.8, for closing a package or filled receptacle with means to heat by radiant energy.
- 374.2 With nonplanar sealing surface:**
This subclass is indented under subclass 373.7. Apparatus wherein the means to supply or remove thermal energy has a surface that is other than flat along the full length of the seam.
- 374.3 With means to advance package during closing:**
This subclass is indented under subclass 373.7. Apparatus including structure to cause the filled package to move as enclosure is completed while engaged by the enclosure completing means.
- 374.4 Closing means comprising roller or roller-like member:**
This subclass is indented under subclass 374.3. Apparatus wherein the means to close the package or filled receptacle turns about an axis and engages with its radially outwardly facing radial extremity with rolling engagement.
- 374.5 Closing means moving with package during closing:**
This subclass is indented under subclass 374.3. Apparatus wherein the means to complete the enclosure travels in the same direction as the package during its operation.
- 374.6 And moving perpendicularly to package movement during closing:**
This subclass is indented under subclass 374.5. Apparatus wherein the means to complete the enclosure also travels normally to the direction of package travel as it functions.
- 374.7 With means to fold cover after closing:**
This subclass is indented under subclass 374.3. Apparatus by which face-to-face portions of the cover are subsequently folded.
- 374.8 With package stationary during closing:**
This subclass is indented under subclass 373.7. Apparatus wherein the package is motionless as enclosure is completed.
- 374.9 Pivoted means to close package:**
This subclass is indented under subclass 374.8. Apparatus wherein the means to complete the enclosure turns about an axis to function.
- 375.2 With means to fold cover after closing:**
This subclass is indented under subclass 374.8. Apparatus by which face-to-face portions of the cover are subsequently folded.
- 375.3 Means to cool seam:**
This subclass is indented under subclass 373.7. Apparatus including structure provided to reduce the thermal level of the cover in the region where portions are face-to-face.
- 375.4 With means to advance package during closing:**
This subclass is indented under subclass 373.2. Apparatus including structure to cause the filled package to move as enclosure is completed while engaged by the enclosure completing means.
- 375.5 With means to fold cover after closing:**
This subclass is indented under subclass 375.4. Apparatus by which face-to-face portions of the cover are subsequently folded.
- 375.6 With package stationary during closing:**
This subclass is indented under subclass 373.2. Apparatus wherein the package is motionless as enclosure is completed.
- 375.7 With means to fold package cover after closing:**
This subclass is indented under subclass 375.6. Apparatus by which face-to-face portions of the cover are subsequently folded.
- 375.8 By means adapted to engage overlapped seam:**
This subclass is indented under subclass 285. Apparatus wherein the unfinished package includes a first edge and a second opposing edge, which apparatus includes means to lay the inner face of the first edge over the outer face of the second edge to close the package such that the second edge is hidden by the first edge.

375.9 With means to heat or cool seam:

This subclass is indented under subclass 375.8. Apparatus in which means is provided to apply or remove thermal energy from engaging surfaces of the cover.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

373.7+, for apparatus having means to apply or remove heat from an outturned seam without a pleat, and see the notes thereto for heat sealing elsewhere classified.

SEE OR SEARCH CLASS:

219, Electric Heating, for heating by electrical resistance, especially subclasses 59.1+ and 78.16, respectively, for heating a metal tube by the use of electrically generated heat, and subclasses 603+ for inductive heating of metal tubes.

376.2 With means to advance package during closing:

This subclass is indented under subclass 375.8. Apparatus including structure to cause the filled package to move as enclosure is completed while engaged by the enclosure completing means.

376.3 Package or receptacle having closure flap, e.g., carton flap, box lid, etc.:

This subclass is indented under subclass 285. Apparatus in which the enclosure of the contents is completed by displacing a portion of the cover that projects therefrom which is either integral with the cover or is a distinct member that is attached to the cover.

- (1) Note. Closing the flap of an envelope is included in this subclass.
- (2) Note. Closing an egg carton with a single flap is included herein.
- (3) Note. A "flap" may pivot about an axis or may pivot about a loosely defined axis. A distinct lid pivotally attached to a cover is considered to be a "flap".

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 284.3, for apparatus which fills an envelope and closes it by displacing a flap.
- 287+, for apparatus which completes the enclosure of the contents by securing a separate closure member to another cover member.
- 376.4+, for closing an egg carton by engagement with multiple flaps of the carton.
- 377.5, for closing an egg carton by tucking a closure flap inside the cover.
- 484, for a method of closing a preformed, freestanding, rigid or semi-rigid container.

SEE OR SEARCH CLASS:

156, Adhesive Bonding and Miscellaneous Chemical Manufacture, subclasses 441.5+, for apparatus for moistening and sealing an envelope.

376.4 Multiple closure flaps:

This subclass is indented under subclass 376.3. Apparatus wherein a package or filled receptacle having, prior to folding, a plurality of slot separated flaps which package is then closed by folding the flaps inwardly upon one another.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 47, for corresponding methods.
- 207+, for wrapping machines which shape a notched or corner slit cover blank about the contents as well as close the package thus formed.
- 491, for a method of closing a preformed, freestanding, rigid or semi-rigid container by folding multiple preformed flaps.
- 564+, for apparatus by which a carton is set up and filled.

376.5 With means to apply adhesive:

This subclass is indented under subclass 376.4. Apparatus combined with structure to supply bonding material to the cover of the package in the vicinity of engagement of the face of a flap with a face of the cover engaged thereby.

376.6 With means to heat or cool flap:

This subclass is indented under subclass 376.4. Apparatus in which means is provided to apply or remove thermal energy from engaging surfaces of the cover.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

373.7+, for apparatus having means to apply or remove heat from an outturned seam without a pleat, and see the notes thereto for heat sealing elsewhere classified.

SEE OR SEARCH CLASS:

219, Electric Heating, for heating by electrical resistance, especially subclasses 59.1+ and 78.16, respectively, for heating a metal tube by the use of electrically generated heat, and subclasses 603+ for inductive heating of metal tubes.

376.7 With means to advance package during closing:

This subclass is indented under subclass 376.6. Apparatus including structure to cause the filled package to move as enclosure is completed while engaged by the enclosure completing means.

376.8 With package stationary during closing:

This subclass is indented under subclass 376.6. Apparatus wherein the package is motionless as enclosure is completed.

377.2 With means to advance package during closing:

This subclass is indented under subclass 376.4. Apparatus including structure to cause the filled package to move as enclosure is completed while engaged by the enclosure completing means.

377.3 With package stationary during closing:

This subclass is indented under subclass 376.4. Apparatus wherein the package is motionless as enclosure is completed.

377.4 With means to apply adhesive:

This subclass is indented under subclass 376.3. Apparatus combined with structure to supply bonding material to the cover of the package in

the vicinity of engagement of the face of a flap with a face of the cover engaged thereby.

377.5 Tucked inside cover:

This subclass is indented under subclass 376.3. Apparatus including means to place the projecting flap portion under another portion of the cover.

377.6 Attached flap:

This subclass is indented under subclass 376.3. Apparatus wherein a closure member fastened to and pivotable with respect to a preformed receptacle is positioned in or over an aperture of said receptacle, so as to complete the enclosure.

(1) Note. Included here is a device for closing a paper or cardboard carton provided with a hinged, staple-attached closure.

377.7 With means to heat or cool flap:

This subclass is indented under subclass 376.3. Apparatus in which means is provided to apply or remove thermal energy from engaging surfaces of the cover.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

373.7+, for apparatus having means to apply or remove heat from an outturned seam without a pleat, and see the notes thereto for heat sealing elsewhere classified.

477, for a method of closing a package or filled container by heat sealing.

SEE OR SEARCH CLASS:

219, Electric Heating, for heating by electrical resistance, especially subclasses 59.1+ and 78.16, respectively, for heating a metal tube by the use of electrically generated heat, and subclasses 603+ for inductive heating of metal tubes.

377.8 With means to advance package during closing:

This subclass is indented under subclass 377.7. Apparatus including structure to cause the filled package to move as enclosure is completed while engaged by the enclosure completing means.

378.3 With means to advance package during closing:

This subclass is indented under subclass 376.3. Apparatus including structure to cause the filled package to move as enclosure is completed while engaged by the enclosure completing means.

381.1 MEANS TO OPEN OR ERECT RECEPTACLE:

This subclass is indented under the class definition. Apparatus (1) for engaging a portion of the cover, such as a flap for moving such portion as to permit ready access for filling or other operation of the cover or (2) for engaging a formed but collapsed receptacle and expanding or erecting the receptacle to an open or contents receiving form.

- (1) Note. Included here is a device for shifting or removing a closure, lid, cap or seal with respect to a receptacle so as to uncover an aperture for filling, emptying or treatment of said receptacle. The closed receptacle is handled, positioned or oriented by the mechanism which then shifts or removes the closure.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 50, for apparatus for unfolding or opening a filled package and inserting additional contents therein.
- 75+, for package making apparatus including automatic or triggered control of package and filled receptacle closing or opening means.
- 169, for apparatus for opening the shell or shuck of a tray and shell type package and placing the slide therein.
- 331.5, for package making including use of a securing device which effects relative rotation between a receptacle and a closure already on the receptacle, including means to convey or feed the so partially assembled closure and receptacle to the securing means.
- 492, for a method of package making comprising opening only.
- 564+, for apparatus for opening a collapsed receptacle and subsequently filling the same.

SEE OR SEARCH CLASS:

- 81, Tools, subclasses 3.2+ for means to remove a receptacle closure wherein a closed receptacle is manually presented to said means or the means is manually applied to said receptacle or closure.
- 141, Fluent Material Handling, With Receiver or Receiver Coating Means, appropriate subclasses for a filling system for fluent material having means to open a self-closing receiver.
- 414, Material or Article Handling, subclasses 411+ for a device for emptying a portable receptacle, which device includes means for opening prior to emptying the receptacle.
- 493, Manufacturing Container or Tube From Paper; or Other Manufacturing From a Sheet or Web, subclasses 51+ for forming a receptacle or container from paper or other sheet or web.

381.2 With cutting means:

This subclass is indented under subclass 381.1. Apparatus combined with a sharp provision for penetration to divide one portion of the cover material from another.

SEE OR SEARCH CLASS:

- 30, Cutlery, subclasses 400+ for a can opener.

381.3 To open envelope:

This subclass is indented under subclass 381.2. Apparatus particularly adapted to provide access into a cover comprised of upper and lower planar sheets which, before access to the package, engaged each other and were united at their perimeters, which cover was intended to hold sheet-like goods.

- (1) Note. An "envelope" with a bellows or gusset is not included herein.

381.4 Means to remove separate closure:

This subclass is indented under subclass 381.1. Apparatus for use with a receptacle including a first cover and a second distinct cover portion that serves in conjunction with the first to contain the contents, comprising structure particu-

larly adapted to removing the second cover portion from the first.

381.5 Means to open envelope:

This subclass is indented under subclass 381.1. Apparatus particularly adapted to provide access into a cover comprised of upper and lower planar sheets which, before access to the package, engaged each other and were united at their perimeters, which cover was intended to hold sheet-like goods.

- (1) Note. An “envelope” with a bellows or gusset is not included herein.

SEE OR SEARCH THIS CLASS, SUBCLASS:

569, for apparatus for forming and filling a letter-type envelope.

381.6 Including means to apply suction to grip envelope:

This subclass is indented under subclass 381.5. Apparatus including means to engage the cover and reduce the pressure at the area of engagement such that atmospheric pressure forces the cover area to adhere to the engaging means in order to manipulate that area of the cover.

381.7 Means to open flap:

This subclass is indented under subclass 381.5. Apparatus including means particularly intended to lift a portion of the cover that projects therefrom which is either integral with the cover or is a distinct member attached to the cover.

- (1) Note. A “flap” may pivot about an axis or may pivot about a loosely defined axis. A distinct lid pivotally attached to a cover is considered to be a “flap”.

382.1 Means to open flap, e.g., carton flap, box lid, etc.:

This subclass is indented under subclass 381.1. Apparatus including means particularly intended to lift a portion of the cover that projects therefrom which is either integral with the cover or is a distinct member attached to the cover.

- (1) Note. A “flap” may pivot about an axis or may pivot about a loosely defined

axis. A distinct lid pivotally attached to a cover is considered to be a “flap”.

382.2 Means to fold flap about line perpendicular to receptacle movement:

This subclass is indented under subclass 382.1. Apparatus wherein the receptacle is moved and wherein the flap lifting means is particularly adapted to move a flap at the leading or trailing side of the receptacle.

382.3 And means to fold another flap about line parallel to receptacle movement:

This subclass is indented under subclass 382.2. Apparatus also particularly adapted to move a flap at a lateral side of the receptacle.

383.1 With means to apply adhesive:

This subclass is indented under subclass 381.1. Apparatus combined with structure to supply bonding material to the cover of the package in the vicinity of engagement of the face of a flap with a face of the cover engaged thereby.

SEE OR SEARCH CLASS:

118, Coating Apparatus, for coating means, generally.

384.1 Means to open bag:

This subclass is indented under subclass 381.1. Apparatus particularly adapted to provide access into a cover of a pliable container including a bottom and sides but open at the top for filling and closing.

385.1 Including means to apply air blast:

This subclass is indented under subclass 384.1. Apparatus including structure to cause flow of atmospheric air or air under compression to flow against the bag to provide access therein.

386.1 Including means to apply suction:

This subclass is indented under subclass 384.1. Apparatus including structure to remove atmospheric pressure (i.e., establish a vacuum) from one surface of the cover to provide access to the bag.

387.1 MEANS TO HOLD FLAP:

This subclass is indented under the class definition. Apparatus including means to engage a projecting portion of the cover and press or maintain that portion under pressure for a suffi-

cient time that after release of the pressing means that portion will remain in position.

- (1) Note. The apparatus of this subclass may hold the flap for a sufficient time to (1) affect a bond or (2) set or dry the cover material.

SEE OR SEARCH CLASS:

- 100, Presses, for a press not elsewhere provided for.
493, Manufacturing Container or Tube From Paper; or Other Manufacturing From a Sheet or Web, subclasses 183+ for making a rigid container including closing the end of a tube by folding end flaps; subclasses 260+ for making a pliable container including folding end flaps; and subclass 308 for apparatus to close the end of a tube, e.g., by twisting.

387.2 While package is moving:

This subclass is indented under subclass 387.1. Apparatus particularly adapted to engage the projecting portion of a cover as that cover and its contents are in motion.

387.3 With means to heat or cool flap:

This subclass is indented under subclass 387.2. Apparatus including structure intended to raise or lower the thermal level of the projecting portion.

387.4 With means to heat or cool flap:

This subclass is indented under subclass 387.1. Apparatus including structure intended to raise or lower the thermal level of the projecting portion.

389.1 MEANS TO FEED COVER MATERIAL:

This subclass is indented under the class definition. Apparatus for delivering unformed packaging material to a package-making machine.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 64+, for automatic or triggered control of the cover feed, especially subclass 66 for devices to sever cover lengths which are determined by the size of the contents.

SEE OR SEARCH CLASS:

- 83, Cutting, for a material feeder combined with a severing device, generally.
226, Advancing Material of Indeterminate Length, for methods of, or apparatus for, feeding material without utilizing both the leading and trailing ends to effect movement of the material.
271, Sheet Feeding or Delivering, for sheet feeding or delivering apparatus, and see the search note under the class definition of Class 271.
493, Manufacturing Container or Tube From Paper; or Other Manufacturing From a Sheet or Web, subclasses 210+ for making a container including feeding a cover for assembly therewith.

389.2 Continuous web cover material:

This subclass is indented under subclass 389.1. Apparatus particularly adapted to deliver packaging material which comprises an elongated sheet, wherein the sheet is of sufficient length that at least one of the leading and trailing ends thereof is not recognized (engaged) by the delivering apparatus.

389.3 With cutter:

This subclass is indented under subclass 389.2. Apparatus combined with means including a sharp cutting edge adapted to piercingly engage the packaging material.

SEE OR SEARCH CLASS:

- 83, Cutting, for a material feeder combined with a severing device, generally.

389.4 Roller or roller-like feeder:

This subclass is indented under subclass 389.2. Apparatus including means to deliver the packaging material by engagement therewith by a surface of a member turning about an axis, which surface faces radially away from that axis such that the surface and the packaging material move at the same speed.

389.5 Comprising endless belt:

This subclass is indented under subclass 389.4. Apparatus wherein the surface is part of a band connected to itself and guided to move along a

path that is not about said axis during a portion of its loop.

390 AIDS TO MANUAL PACKING:

This subclass is indented under the class definition. Apparatus for assisting the formation of a package or the filling of a receptacle by a hand operation.

- (1) Note. This and indented subclasses includes plural supports for holding a plurality of package components (e.g., receptacles and contents) within reach of a packer.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 145, for devices for packing articles in receivers and forming a dress or display layer, the packing usually being accomplished by hand.
219, for wrapping machines in which the wrapper is folded over the contents by hand.

SEE OR SEARCH CLASS:

- 141, Fluent Material Handling, With Receiver or Receiver Coating Means, subclass 391 for aids to manual packing of fluent materials, and see the search notes to the subclass definition.
248, Supports, subclasses 128+ and 146+ for receptacle supports which may be for the disclosed purpose of supporting a receptacle while being manually packed.

391 Power-driven conveyor:

This subclass is indented under subclass 390. Apparatus which includes at least one mechanism to affirmatively move the package components to and/or the assembled package from the point of packaging.

SEE OR SEARCH CLASS:

- 141, Fluent Material Handling, With Receiver or Receiver Coating Means, subclasses 250+ or 391 for conveyor aids for manually filling receivers with fluent materials.

392 Receptacle inversion:

This subclass is indented under subclass 390. Apparatus including means to turn or facilitate turning the package or filled receptacle through an angle of substantially 180° in a vertical plane.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 243, for means for filling a receptacle while in the inverted position and then inverting the filled receptacle.

SEE OR SEARCH CLASS:

- 141, Fluent Material Handling, With Receiver or Receiver Coating Means, subclasses 319+ for apparatus for filling a receiver with fluent materials in which the supply and receiver are manually coupled and inverted.
198, Conveyors: Power-Driven, subclasses 402+ for a conveyor having means for inverting the conveyed load.
414, Materials or Article Handling, subclasses 754+ for devices for inverting an article.

393 MISCELLANEOUS:

This subclass is indented under the class definition. Apparatus for making a package or for devices in which less than a complete packaging operation is effected and not provided for in the subclasses above or in other existing classes.

SEE OR SEARCH CLASS:

- 493, Manufacturing Container or Tube From Paper; or Other Manufacturing From a Sheet or Web, subclasses 51+ for making a container to be subsequently filled.

394 MATCHBOOK MAKING:

This subclass is indented under the class definition. Methods and apparatus for fabricating previously dipped or headed matches or match containing assemblies into a unitary structure with a cover.

SEE OR SEARCH CLASS:

- 44, Fuel and Related Compositions, subclasses 507+ for match structures and manipulating processes for constructing them, especially subclasses 508+ for multiple matches and subclass 509 for match cards.
- 144, Woodworking, subclasses 50+ for apparatus for or process of matchmaking, especially subclass 51 for making match combs for insertion into match books.
- 206, Special Receptacle or Package, subclasses 90+ for a package combined with a match(es) for igniting the tobacco content; and subclasses 96+ for a match packet, container, or holder.

395 Methods:

This subclass is indented under subclass 394. Methods .

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 142+, for packaging match books and other tapered or headed articles.
- 396+, for other packaging methods.

SEE OR SEARCH CLASS:

- 44, Fuel and Related Compositions, subclass 512 for manipulating processes for constructing matches.

396 METHODS:

This subclass is indented under the class definition. Methods not provided for elsewhere.

397 Applying a partial cover:

This subclass is indented under subclass 396. Methods for applying a cover or cover material and leaving a substantial portion of the contents exposed.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 441+, for the applying of a partial cover to contents and subsequent shrinking of the partial cover.
- 449, for the applying of plural partial covers which are superimposed or overlapped.

- 473, for the depositing of articles in an orderly arrangement upon a tray or flat.
- 476+, particularly subclass 488 for the partial encasing of the mouth of a bottle by a hood, cot, or sleeve to either close the bottle or protect the closure.
- 580, for corresponding apparatus.

398 Partial covering of multiple cans, bottles (e.g., six-pack carrier):

This subclass is indented under subclass 397. Methods for associating a plurality of containers, usually six or eight bottles or cans, with a partial cover.

- (1) Note. The cover may have a handle means whereby the resultant package may be picked up and carried with one hand.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 48.1+, for apparatus for fabricating cover material to make a package or for filling a preformed receptacle, the contents of which comprises a plurality of bottles or cans.

399 Banding:

This subclass is indented under subclass 397. Methods for applying cover material (e.g., band, sleeve, or wrapper) which encircles the contents in one direction only, such as girth, but leaves both sides or ends thereof fully exposed, the cover or cover material frictionally contacting the contents so as to be retained thereabout.

- (1) Note. See Glossary for definitions of “bands” and “binding” and “Packaging and Binding Elsewhere Classified” and the search notes associated therewith for banding and binding classified elsewhere.
- (2) Note. The placing of binding around a package, the primary purpose of which is to aid in or contribute to the retention of a cover about the contents, is not considered a band for this subclass.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

414, see (2) Note above.

582+, for corresponding apparatus.

400 With adsorption or absorption of contents:

This subclass is indented under subclass 396. Methods in which the contents is adsorbed or absorbed by the cover.

(1) Note. An absorbent or adsorbent material which remains associated with the cover upon discharge of the contents is considered to be part of the cover.

(2) Note. The patents in this subclass relate mainly to the storage of acetylene gas.

401 With nonreactive packaging materials:

This subclass is indented under subclass 396. Methods in which the cover is made of a particular material or is treated to prevent chemical reaction with the contents.

402 With inhibitor:

This subclass is indented under subclass 396. Methods including introducing into the package as a portion of the contents a substance which acts to prevent chemical reaction between the contents and cover material.

(1) Note. The introduction of inert gas into a package is not considered to be an inhibitor for this subclass.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

401, for methods of packaging in which the cover is made of a particular material to prevent chemical reaction with the contents.

432, for methods of packaging which include subjecting the contents to an inert gas. See (1) Note above.

403 Gas filling and/or evacuating and closing:

This subclass is indented under subclass 396. Methods of charging and/or evacuating receptacles with gas or vapor only and completing the enclosure.

(1) Note. Where the charging of the receptacle with gas or the evacuation of the

receptacle is an incident to the making of the receptacle, such as blowing a glass receptacle or using a vacuum to hold parts together while joining them, the patent is excluded from this class and will be found in the appropriate receptacle making class; see the Notes below.

(2) Note. Where the claims of the patent include any subject matter which limits the process or apparatus to use in manufacturing a particular article, such as claiming operations which could be performed only where an electric switch or electric lamp was being manufactured, the patent is excluded from this class and will be found in the particular class which provides for making the article claimed. If the claims merely recite by name the article being manufactured but the process or apparatus is of general utility, such recitation alone will not be sufficient to exclude the patent from this class.

(3) Note. Where the gas charging or the evacuation involves the use of a chemical reaction either to generate the gas to be charged into the receptacle or to combine with the gas in the receptacle to produce the vacuum (gettering), the patent is excluded from this class and will be found in the particular class which provides for making the article: see the Notes below.

(4) Note. Merely stating that a machine has exhaust heads does not constitute subject matter for this or indented subclasses where the claimed operations performed on the article held in the exhaust is neither exhausting nor gas filling.

(5) Note. Gas charging and/or evacuating combined with assembly other than that of applying a closure to a receptacle is not classified herein; see Notes below for the classes providing for such combination.

(6) Note. This subclass is restricted to gas or vapor handling in combination with closing. Any additional treatment of contents or filling with articles or fluent

material requires that the combination be classified in the appropriate subclasses below.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 79, for apparatus including gas charging and/or evacuating of receptacles combined with closing.
- 266.1+, for apparatus to fill and close pre-formed receptacles.
- 285+, for apparatus to close packages and filled receptacles.
- 432+, for methods of subjecting the contents of a package to a vacuum or gas treatment.
- 467, for methods of filling and closing receptacles with contents other than gas.

SEE OR SEARCH CLASS:

- 34, Drying and Gas or Vapor Contact With Solids, appropriate subclasses, especially subclasses 92, 191, 242, 284+, 402+, and 558 for miscellaneous processes and apparatus for drying receptacles by the use of gas or vacuum.
- 65, Glass Manufacturing, subclass 34 for a glassworking or treating process including evacuation of a glass product; and subclass 270 for glass envelope tipping off apparatus with or without evacuating means; see section I in Class 53 for the line between Class 53 and receptacle manufacturing classes.
- 81, Tools, subclass 15.4 for tools enabling air to escape from pneumatic tires.
- 99, Foods and Beverages: Apparatus, subclass 472 for apparatus for removing air from foodstuffs which includes a chamber and means for exhausting the air therefrom.
- 102, Ammunition and Explosive, subclass 39 for gas containing or generating cartridges.
- 137, Fluid Handling, is the generic class for fluid handling (including gas); see particularly subclasses 223+ for inflatable article filling chucks and/or stems. (See the Notes to subclass 223 for the line).

- 141, Fluent Material Handling, With Receiver or Receiver Coacting Means, subclasses 4+ for processes of modification of the gaseous content of a receiver, per se.
- 152, Resilient Tires and Wheels, subclasses 415+ for inflating pneumatic tires combined with vehicle or wheel structure, including means more or less permanently connected with the individual tire and means for inflating one tire from another. This subclass includes pneumatic tires with valve structure as well as inflating devices.
- 206, Special Receptacle or Package, subclasses .6+ for gas container.
- 219, Electric Heating, subclasses 50+ and 602+ for inductive heating and for electric heating of metal, respectively. Note particularly subclasses 59.1+ and 607+ where the metal is a tube.
- 220, Receptacles, subclasses 581+ for a high-pressure-gas tank.
- 222, Dispensing, subclasses 3+ for gas dispensing and see search classes listed in section 4 of the class definition of Class 222.
- 223, Apparel Apparatus, subclass 67 for inflatable forms.
- 228, Metal Fusion Bonding, appropriate subclass for making or closing a receptacle by an operation which includes soldering, brazing, or welding.
- 244, Aeronautics and Astronautics, subclass 97 for devices for expanding or compressing the gas cells of a lighter-than-air craft to alter the buoyancy of the craft; subclass 98 for devices for inflating the buoyant gas containers of such aircraft; and subclass 99 for devices for releasing the buoyant gas from such aircraft.
- 252, Compositions, subclass 181.1 for getters; and subclass 364 for solvents.
- 413, Sheet Metal Container Making, subclasses 31+ for roller die seaming means.
- 417, Pumps, for pumps, per se, which may handle gaseous fluids.
- 418, Rotary Expansible Chamber Devices, for rotary expansible chamber devices, per se, used for evacuating and gas charging a sealed body.

- 422, Chemical Apparatus and Process Disinfecting, Deodorizing, Preserving, or Sterilizing, subclasses 56+ which is the generic place for apparatus for chemically purifying or separating gases.
- 423, Chemistry of Inorganic Compounds, subclasses 210+ for processes, involving a chemical reaction, for separating or purifying gaseous mixtures.
- 426, Food or Edible Material: Processes, Compositions, and Products, subclass 404 for packing food products under reduced pressure combined with a food working operation.
- 441, Buoys, Rafts, and Aquatic Devices, subclasses 92+ for inflatable structures for sustaining a user partially immersed in a liquid and provided with a pneumatic envelope and a source of gas for distending the envelope embodied in or forming a part of the inflatable structure.
- 445, Electric Lamp or Space Discharge Component or Device Manufacturing, subclasses 53+ and the subclasses specified in the Notes to those subclasses for process; and subclasses 70 and 73 for apparatus which is limited by claimed subject matter to use in manufacturing electric lamps or electric space discharge devices. For a statement of the line between Class 445 see the reference to Class 53 in the Notes to the class definition of Class 445.
- 446, Amusement Devices: Toys, subclasses 176+ for pneumatically-operated toys, and subclasses 220+ for inflatable toys.
- 502, Catalyst, Solid Sorbent, or Support Therefor: Product or Process of Making, especially subclasses 60+ and 400+ for a sorbent composition, per se.
- 404 With solder or wax sealing:**
This subclass is indented under subclass 403. Methods including the step or steps of applying and fusing or merely fusing a heat sensitive bonding agent in conjunction with the step of closing.
- (1) Note. The fusing of the material either seals and secures a separate closure onto a receptacle or serves as a closure itself for a vent-like opening.
- (2) Note. The term “solder” is here used, loosely, to include any metallic or non-metallic heat sensitive bonding agent.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
81+, for apparatus including means to charge and/or evacuate receptacles with gas or vapor only combined with means to complete receptacle enclosure by soldering.
- 477, for methods of heat sealing packages and filled receptacles.
- SEE OR SEARCH CLASS:
228, Metal Fusion Bonding, subclasses 101+ for the process of joining by soldering, brazing, or welding.
- 405 Evacuating only and closing:**
This subclass is indented under subclass 403. Methods limited to exhausting or removing gas or vapor from a receptacle and completing the enclosure.
- (1) Note. The exhausting or removing requires a positive pumping or suction. Mere valving or venting so as to allow a flow of gas is not here considered to be evacuating.
- (2) Note. This subclass is restricted to gas or vapor handling in combination with closing. Any additional treatment of contents or filling with articles or fluent material requires that the combination be classified in the appropriate subclasses below.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
79, for apparatus including gas charging and/or evacuating combined with closing.
- 408, for methods of gas charging a receptacle and completing the enclosure including evacuating.

432+, for methods which subject the contents of a package to a vacuum.

440+, for apparatus including gas charging and/or evacuating combined with closing.

SEE OR SEARCH CLASS:

141, Fluent Material Handling, With Receiver or Receiver Coating Means, subclasses 4+ for processes of modification of the gaseous content of a receiver, per se.

406 With gas igniting:

This subclass is indented under subclass 403. Methods including the step or steps of causing combustion of the gas or gases with which a receptacle is charged.

- (1) Note. The combustion of the gas or gases is usually restricted to the head space and area adjacent to the head space of a receptacle so as to sterilize and/or create an inert atmosphere in said head space.

407 With steam filling:

This subclass is indented under subclass 403. Methods including the step or steps of utilizing water vapor.

- (1) Note. The steam is used to sterilize and/or assist in the creation of a vacuum within the head space of a receptacle.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

79+, especially subclass 110 for apparatus which applies steam to the head space of a receptacle.

408 Including evacuating:

This subclass is indented under subclass 403. Methods of both evacuating and gas charging receptacles with the step of completing the enclosure.

- (1) Note. The evacuation may precede the gas charging or may follow the gas charging.
- (2) Note. See (1) Note under subclass 405 for the concept of evacuating.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

79+, for apparatus to gas charge and/or evacuate a receptacle and complete the enclosure.

405, for the methods limited to evacuating receptacles and completing the enclosure.

409 Annular package:

This subclass is indented under subclass 396. Methods for making a package in which the contents to which the cover is applied has a through opening into or through which the cover material is inserted, or for filling a receptacle which has a through opening which forms a contents-containing space of annular shape.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

204, for apparatus for applying a cover to contents having a through opening into or through which the cover is inserted.

SEE OR SEARCH CLASS:

100, Presses, subclass 12 for apparatus, not otherwise provided for, for placing a binder which passes through the opening in ring-like material.

242, Winding, Tensioning, or Guiding, subclasses 434+ for winding elongated material through a central opening of a ring-shaped core.

410 Forming a cover adjunct or application of a cover adjunct to a cover:

This subclass is indented under subclass 396. Methods for performing an operation with respect to the cover to provide it with some accessory, device, or abiding characteristic in addition to or beyond the mere enclosing of the contents.

- (1) Note. See Glossary for meaning of the term "cover adjunct". The operations of slitting or notching of cover blanks and flaps preparatory to shaping the cover or the application of adhesive to the cover to aid in seam retention are not considered cover adjuncts for this subclass.

- (2) Note. The partial encasement of the mouth portion of a bottle by a hood, cot, or sleeve to either close the bottle or protect the closure is not considered a cover adjunct application.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 128.1+, for corresponding apparatus.
476+, especially subclass 488 (see (2) Note above).

SEE OR SEARCH CLASS:

- 206, Special Receptacle or Package, appropriate subclass for receptacles with handles.
229, Envelopes, Wrappers, and Paperboard Boxes, subclasses 117.09+ for a handle combined with a paperboard box.
383, Flexible Bags, subclasses 6+ for bags with handles.
493, Manufacturing Container or Tube From Paper; or Other Manufacturing From a Sheet or Web, subclasses 102+ for making a rigid container including application of a cover thereto.

411 **Printing or protective coating:**

This subclass is indented under subclass 410. Methods which include means for (a) producing a character or design on a surface of the cover or cover adjunct by impressing of dies or type or by applying coating material thereto through openings in a pattern sheet (e.g., stenciling), or for (b) applying a protective film or impregnant on a surface of the cover material or a part thereof during some portion of the operation of forming a package.

- (1) Note. The application of bonding material, e.g., an adhesive, is not considered a printing or coating application for this subclass.
(2) Note. The application of a protective coating to a cover can be found here.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 401, for methods of treating a cover to prevent chemical reaction with the contents.

- 402, for methods of introducing as part of the contents an inhibitor which acts to prevent chemical reaction between the cover and contents.

SEE OR SEARCH CLASS:

- 101, Printing, appropriate subclasses, especially subclass 483 for printing processes.
156, Adhesive Bonding and Miscellaneous Chemical Manufacture, subclasses 277 through 280 for methods of laminating combined with printing or coating.
206, Special Receptacle or Package, subclass 459.1 for a special receptacle or package with an indicator and subclass 459.5 for a special receptacle or package with indicia.
427, Coating Processes, appropriate subclasses for coating processes.
493, Manufacturing Container or Tube From Paper; or Other Manufacturing From a Sheet or Web, subclasses 187+ for making a pliable container combined with printing.

412 **Package opening device (e.g., tear strip):**

This subclass is indented under subclass 410. Methods for forming on, applying to, or otherwise providing for some structure associated with the cover material for facilitating the removal of at least a portion of the cover thereby exposing part or all of the contents.

- (1) Note. Methods including a notching or slitting operation, if performed for the expressed purpose of providing for removal of portions of cover to expose contents, will be found here.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 133.3, for the corresponding apparatus.

SEE OR SEARCH CLASS:

- 156, Adhesive Bonding and Miscellaneous Chemical Manufacture, subclasses 166+ for methods of bonding filamentary material to a web or sheet.
206, Special Receptacle or Package, appropriate subclasses, e.g., 12, 222, 227, 239, 250, and 264 for receptacles

and packages with opening devices; paper receptacles, subclasses 601+ for receptacles having devices for readily opening same.

413, Sheet Metal Container Making, subclasses 31+ for roller die seaming means.

493, Manufacturing Container or Tube From Paper; or Other Manufacturing From a Sheet or Web, subclass 86 for making a rigid container combined with assembling therewith a member having a tearing edge.

413 **Handle:**

This subclass is indented under subclass 410. Methods for (a) securing on or applying over the cover material or the completed package material to serve as a handle, or for (b) forming a handle from the existing cover material of the package.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

134.1, for corresponding apparatus.

SEE OR SEARCH CLASS:

206, Special Receptacle or Package, appropriate subclasses for receptacles and packages with handles.

229, Envelopes, Wrappers, and Paperboard Boxes, subclasses 117.09+ for a handle combined with a paperboard box.

383, Flexible Bags, subclasses 6+ for bags with handles.

493, Manufacturing Container or Tube From Paper; or Other Manufacturing From a Sheet or Web, subclass 88 for making a container with assembling a handle therewith.

414 **Binding string:**

This subclass is indented under subclass 410. Methods for placing a binding about the package to aid in the retaining of the cover about the contents.

(1) Note. See Glossary for definition of binding.

(2) Note. For binding classified elsewhere see Packaging and Binding Elsewhere Classified and the search notes associated therewith.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

138.6, for corresponding apparatus.

399, for methods of placing a band about a package.

424, for methods of placing a binding about the skirt of a closure element.

SEE OR SEARCH CLASS:

100, Presses, subclasses 2+ for methods of binding.

415 **Strip, stamp, nonencircling label, or space filler:**

This subclass is indented under subclass 410. Methods for applying sheet material of less extent than complete encirclement of the package to a surface of the cover material, or for applying a sheet of material to the cover to bridge the gap resulting from failure of the edges of opposite flaps to abut or overlap each other.

(1) Note. The sheet material may comprise a strip, tape, or stamp and may either comprise simply a label or may serve to retain seams of flaps in sealed relationship.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

135.1, for corresponding apparatus.

SEE OR SEARCH CLASS:

156, Adhesive Bonding and Miscellaneous Chemical Manufacture, for methods of applying labels.

416 **Fastening or sealing:**

This subclass is indented under subclass 410. Methods for applying an element such as a staple, clip, or rivet to secure or seal closure member, or to join two portions of a closure cover together to complete the enclosing of the contents.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

138.1, for corresponding apparatus.

SEE OR SEARCH CLASS:

29, Metal Working, subclasses 505+ for methods including applying a deform-

- able band around a crimped mouth of a package such as a bag.
- 417 Applying the fastener to a gathered bag neck (e.g., staple or clip):**
This subclass is indented under subclass 416. Methods wherein said closure cover comprises a bag or sleeve-like element gathered at one end and held closed by applying a fastener.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
138.2, for corresponding apparatus.
583, for apparatus for applying a band to a bag neck.
- 418 Sewing:**
This subclass is indented under subclass 416. Methods for stitching at least two portions of the cover together to enclose the contents within the package.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
138.5, for corresponding apparatus.
- SEE OR SEARCH CLASS:
112, Sewing, subclasses 475.01+ for methods of sewing.
- 419 Encircling sealing strip (e.g., adhesive tape):**
This subclass is indented under subclass 416. Methods for applying a tapelike strip completely encircling the package to hold, secure, or render airtight separate parts of the cover.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
137.2, for corresponding apparatus.
399, for methods of band applying.
449, for methods of applying plural covers one of which may be a band.
- 420 For preformed receptacle with separate closure:**
This subclass is indented under subclass 410. Methods relating to the assembly of a separate closure member onto or into the aperture of a preformed receptacle and the application or formation of a cover adjunct in connection therewith.
- 421 Including gasket compressing:**
This subclass is indented under subclass 420. Methods including the step or steps of deforming a gasket between a separate closure element and a receptacle.
- 422 Against side of receptacle:**
This subclass is indented under subclass 421. Methods wherein the gasket is deformed between part of the closure and the peripheral wall of the receptacle.
- 423 Including casting or molding:**
This subclass is indented under subclass 420. Methods including the step of confining a fluid or semifluid material so as to form a closure seal by solidification.
- SEE OR SEARCH CLASS:
164, Metal Founding, appropriate subclasses for metal casting methods and apparatus.
264, Plastic and Nonmetallic Article Shaping or Treating: Processes, appropriate subclasses for molding methods.
- 424 Constricting closure by binding:**
This subclass is indented under subclass 420. Methods including the step of folding, corrugating, or drawing in the skirt of a closure element by means of a resilient band about said skirt or by deforming a wire band or strip about said skirt.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
138.6+, for apparatus including means to secure a bottle hood by means of a binding string.
- 425 Sterilizing complete package:**
This subclass is indented under subclass 396. Methods for subjecting the cover and contents as a unit to a process adapted to disinfect, decontaminate, pasteurize, or otherwise render the package aseptic.
- (1) Note. Methods limited to the sterilization of the contents alone are not classified here. See the appropriate contents treating subclasses. The fact that the contents is positioned in or on the cover during sterilization will not justify classification

in this subclass unless there is clear disclosure that a significant portion of the cover is sterilized in the process.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

167, for packaging apparatus combined with sterilizing devices.

428+, see Notes above.

SEE OR SEARCH CLASS:

422, Chemical Apparatus and Process Disinfecting, Deodorizing, Preserving, or Sterilizing, subclass 33 for methods of sterilizing, per se.

426 **Sterilizing cover only:**

This subclass is indented under subclass 396. Methods for aseptically treating only the cover before or during a packaging operation and concurrently or subsequently filling the cover with sterile contents.

SEE OR SEARCH CLASS:

422, Chemical Apparatus and Process Disinfecting, Deodorizing, Preserving, or Sterilizing, subclass 99 for apparatus for sterilizing containers, per se. An alternative electronic search of U.S. patents based upon a modification of the European Patent Office Classification (ECLA) System for certain subject matter in this subclass may also be found in Class 422 Cross-Reference Art Collections 908 - 948. (There are no definitions associated with these Cross-Reference Art Collections. The most available disclosure as to the types of documents contained herein is given in any notes associated with the titles.)

427 **Skin packaging (e.g., vacuum forming by conforming cover over contents):**

This subclass is indented under subclass 396. Methods for enclosing contents in sheet material to form a skinlike covering, e.g., by fluid pressure, into tight conforming engagement with a contents material placed on a base and securing the covering sheet to the base to complete the package.

(1) Note. The medium for applying force to the covering is usually vacuum but is not limited thereto for this subclass.

(2) Note. If the base or covering sheet is formed with a product-retaining recess prior to association with the contents, the patent is excluded from this subclass.

(3) Note. Incidentally subjecting the contents to vacuum as the covering is applied will not preclude classification into this subclass.

(4) Note. The base may comprise a card, blank, web, or sheet material and may be different from, or the same as, the covering material.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

433, for methods of forming a receptacle and subjecting contents therein to vacuum or gaseous medium.

453, for methods of forming receptacles by applying heat and pressure.

509, for corresponding apparatus.

428 **With contents treating:**

This subclass is indented under subclass 396. Methods for subjecting the contents, either before, during, or after packaging, to an agency (a) which alters a physical or chemical characteristic of the contents or (b) which prevents constituents of the ambient atmosphere or another ambient condition from altering a physical or chemical characteristic of the contents material.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

111+, for corresponding apparatus.

SEE OR SEARCH CLASS:

141, Fluent Material Handling, With Receiver or Receiver Coating Means, subclasses 11+ for processes of filling receivers with fluent material which include treatment of the material, and see the search note to subclass 111 for a statement as to the type of treatment applicable to Class 141.

- 426, Food or Edible Material: Processes, Compositions, and Products, appropriate subclasses for methods of packaging food combined with a food working step.
- 429 Folding:**
This subclass is indented under subclass 428. Methods for doubling or bending a contents material back upon itself thereby reducing a physical dimension.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
116+, for corresponding apparatus.
- SEE OR SEARCH CLASS:
156, Adhesive Bonding and Miscellaneous Chemical Manufacture, subclasses 196+ for bending sheet material involving surface bonding or assembly.
270, Sheet-Material Associating, subclasses 52.01+ for the folding of sheet material.
- 430 Winding:**
This subclass is indented under subclass 428. Methods for rolling or coiling the contents material upon itself.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
118+, for apparatus for winding sheet material or garments.
- SEE OR SEARCH CLASS:
19, Textiles: Fiber Preparation, subclass 149 for article winding; and subclass 159 for coiling slivers.
156, Adhesive Bonding and Miscellaneous Chemical Manufacture, subclasses 184+ for methods of winding webs or sheets involving surface bonding or assembly.
242, Winding, Tensioning, or Guiding, appropriate subclasses for winding material upon a core.
- 431 Liquid treating:**
This subclass is indented under subclass 428. Methods for treating contents material with a liquid substance.
- SEE OR SEARCH CLASS:
134, Cleaning and Liquid Contact With Solids, subclasses 1+ for processes for treating with a liquid.
422, Chemical Apparatus and Process Disinfecting, Deodorizing, Preserving, or Sterilizing, subclass 33 for methods which may preserve, disinfect, or sterilize a contents material by treatment with a liquid.
- 432 Vacuum or gas treating:**
This subclass is indented under subclass 428. Methods including the step of subjecting the contents to the effects of a gaseous medium or a subatmospheric pressure or both.
- (1) Note. The combination of contents handling or treatment plus the step of applying a vacuum or gaseous medium is found here.
(2) Note. See the search notes under subclass 403 for gassing or vacuumizing provided for elsewhere.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
440, for methods wherein a gaseous atmosphere or vacuum is generated by subjecting the contents to a temperature modification.
510, for apparatus for treating contents with a vacuum or inert atmosphere.
- 433 Receptacle forming:**
This subclass is indented under subclass 432. Methods including the step of fabricating a cover into contents-retaining form.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
427, for methods of skin packaging.
452+, for methods for forming or partially forming receptacles and subsequent filling thereof.
511, for apparatus for forming a receptacle before or during vacuum or gas treatment.

- 434 Flexible preform cover (e.g., bags, pouches):**
This subclass is indented under subclass 432. Methods in which the cover comprises a pre-fabricated baglike receptacle.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 459, for methods for opening and filling bags.
469, for methods for filling and closing bags.
512, for apparatus for treating with vacuum or inert gaseous atmosphere wherein cover is a bag.

- 435 Cutting:**
This subclass is indented under subclass 428. Methods for severing the contents material into two or more discrete smaller portions by forces acting along predetermined lines.

- (1) Note. Forces which produce indiscriminate breakage, i.e., crushing or pulverizing are not considered to be acting along predetermined lines for this subclass.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 428, for methods involving crushing or pulverizing the contents.
513, for corresponding apparatus.

- 436 Compacting or stretching:**
This subclass is indented under subclass 428. Methods including subjecting the contents material to forces which crowd portions of the contents into a more confined space or which contract or elongate the contents without breaking.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 523+, for corresponding apparatus.

SEE OR SEARCH CLASS:

- 100, Presses, subclasses 35+ for methods of compacting or compressing with presses.

- 437 Agitating (e.g., vibrating or jarring):**
This subclass is indented under subclass 436. Methods in which the forces shake, vibrate, or jar the contents into a more confined space.

- (1) Note. Merely vibrating contents for the purpose of conveying is not sufficient for classification in this subclass.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 525, for corresponding apparatus.

SEE OR SEARCH CLASS:

- 366, Agitating, appropriate subclasses for methods of agitating, per se.

- 438 Before association with cover material:**
This subclass is indented under subclass 436. Methods in which the crowding forces are applied to the contents material prior to association of the contents material with the cover.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 529, for corresponding apparatus.

- 439 By simultaneously conveying and compressing:**
This subclass is indented under subclass 438. Methods for crowding the said contents into a smaller volume by conveying and constricting the contents concurrently.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 530, for corresponding apparatus.

- 440 Heating or cooling:**
This subclass is indented under subclass 428. Methods for subjecting the contents material to a treatment which either raises or lowers its temperature.

- (1) Note. Included here are methods which effect a subatmospheric pressure on the contents by subjecting contents and receptacle to temperature variations.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 127, for corresponding apparatus.

SEE OR SEARCH CLASS:

- 62, Refrigeration, subclass 60 for methods involving specific refrigerating steps combined with packaging.

441 Conforming by stretching or shrinking of cover over contents:

This subclass is indented under subclass 396. Methods for conforming the cover material to the contents by reducing the size of the cover to the size of the contents by heating or stretching a smaller cover over a larger contents means.

- (1) Note. The cover may be conformed to the contents (a) by shrinking a larger cover or (b) by stretching a smaller cover over the contents.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

427, for methods of skin packaging.
556+, for corresponding apparatus.

SEE OR SEARCH CLASS:

156, Adhesive Bonding and Miscellaneous Chemical Manufacture, subclasses 84+ for shrinking of material of laminae in adhesive bonding.
206, Special Receptacle or Package, subclass 497 for shrink film packages, per se.

442 By heating:

This subclass is indented under subclass 441. Methods including applying heat to cause the cover material to shrink into conformance with the contents.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

557, for corresponding apparatus.

443 Group forming of contents into a unit:

This subclass is indented under subclass 396. Methods including the bringing together of a plurality of separate contents parts to form the contents for a single cover.

- (1) Note. See Glossary of the class definition for the meaning of the terms “contents” and “group forming”.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

147+, for corresponding apparatus, and see the notes thereto for related art classified elsewhere.

444 Of slender rod-shaped contents (e.g., cigarette):

This subclass is indented under subclass 443. Methods for forming contents portions comprising articles, the diameter or width of which is very small compared to the length.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

148+, for corresponding apparatus.
236, for apparatus for packaging slender, rod-shaped articles.

445 Of diverse contents (e.g., can and coupon):

This subclass is indented under subclass 443. Methods for forming contents in which the external contours or physical dimensions of the contents portions are so different as to require separate, dissimilar packaging steps to form the package unit.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

155, for corresponding apparatus.
238, for apparatus for packaging diverse forms of contents.
474, for methods of packaging diverse contents in which no preliminary group forming takes place.

446 With orienting (e.g., turning labels face out):

This subclass is indented under subclass 443. Methods for changing the attitude of one or more articles to facilitate formation of a desired group arrangement.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

544, for corresponding apparatus.

447 Stacking upon another before packaging:

This subclass is indented under subclass 443. Methods for placing a plurality of articles or layers of articles one upon the other before being associated with a cover.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

531+, for apparatus which may include stacking mechanisms.

448 Single layer forming:

This subclass is indented under subclass 443. Methods for gathering a group of contents portions into a coplanar arrangement or in a single, continuous orderly sequence or linear arrangement.

- (1) Note. The single layer, sequence, or arrangement must be the sole contents for the package of this subclass.

SEE OR SEARCH THIS CLASS, SUBCLASS:

531+, particularly subclass 543 for apparatus for forming a single coplanar group.

449 Plural covers:

This subclass is indented under subclass 396. Method for applying a multiplicity of separate covers around the same contents.

SEE OR SEARCH THIS CLASS, SUBCLASS:

170+, for apparatus for applying two or more separate or distinct covers around the contents of a single package, one cover being superimposed over the other, and see the notes thereto for related art classified elsewhere.

450 Enclosing contents within progressively formed web means:

This subclass is indented under subclass 396. Methods for forming tubular packages successively from a continuous web or a plurality of continuous webs of cover material including the steps of (a) bringing together marginal portions of the web(s) and continuously securing the resulting longitudinal seam(s), or (b) bringing together marginal portions of plural, superposed webs and periodically forming and securing transverse seams.

- (1) Note. If the contents are placed on or between webs after trailing transverse seals are made, the patent is considered involving fabrication of the cover for subclasses 452+.

- (2) Note. If the web is treated by heat or pressure to stretch form the web into a

contents-retaining form prior to or during packaging, the art is in subclass 453.

SEE OR SEARCH THIS CLASS, SUBCLASS:

455, for methods of folding and side sealing web material.

545+, for corresponding apparatus.

SEE OR SEARCH CLASS:

156, Adhesive Bonding and Miscellaneous Chemical Manufacture, subclass 203 for methods of forming a tube.

493, Manufacturing Container or Tube From Paper; or Other Manufacturing From a Sheet or Web, subclass 198 for forming a series of interconnected pliable containers.

451 Vertically formed, filled, and sealed tubular package:

This subclass is indented under subclass 450. Methods in which the longitudinal axis of the tubular cover is maintained generally perpendicular to a horizontal plane during the forming and filling steps.

SEE OR SEARCH THIS CLASS, SUBCLASS:

551, for apparatus for forming vertically extending tubes from a single folded web.

554, for apparatus for forming vertically extended tubes from plural webs.

452 Forming or partial forming a receptacle and subsequent filling:

This subclass is indented under subclass 396. Methods for fabricating a receptacle or for shaping cover material into contents-retaining form and thereafter filling with contents, with or without closing.

- (1) Note. Opening a collapsed receptacle (e.g., bag) is partial forming; and subsequent filling places the art in this subclass.

SEE OR SEARCH THIS CLASS, SUBCLASS:

450, for methods of forming a tubular enclosure or receptacle and simultaneously filling with contents.

- 492, for methods of opening a cover, enclosure, or package without filling.
 558+, for corresponding apparatus.

SEE OR SEARCH CLASS:

- 156, Adhesive Bonding and Miscellaneous Chemical Manufacture, appropriate subclasses for methods of forming receptacles involving adhesive bonding.
 264, Plastic and Nonmetallic Article Shaping or Treating: Processes, appropriate subclasses for methods of shaping plastic receptacles.
 493, Manufacturing Container or Tube From Paper; or Other Manufacturing From a Sheet or Web, subclasses 52+ for making a box; subclasses 186+ for making a bag; and subclasses 269+ for making a tube.

453 Forming a pocket or depression in cover material by applying heat or pressure (e.g., stretch forming):

This subclass is indented under subclass 452. Methods for making contents-receiving cavities in a blank or web (sheet) by the application of mechanical or fluid force or increasing temperature to cause the sheet or blank material to flow at select locations.

- (1) Note. The cavity must not be merely a transient condition in the cover material but must substantially maintain its formed shape after the package is complete.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 559, for corresponding apparatus.
 578, for apparatus for forming a receptacle in a die wherein no plastic deformation of the cover material occurs.

SEE OR SEARCH CLASS:

- 264, Plastic and Nonmetallic Article Shaping or Treating: Processes, subclasses 500+ for methods of molding, filling, and closing of receptacles where the receptacles are filled and/or closed before removal from the molding device.

454 Forming a capsule:

This subclass is indented under subclass 453. Methods which produce a continuous strip containing a series of small pockets usually employed for encapsulating small doses of fluent materials or articles.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 560, for corresponding apparatus.
 900, for apparatus and method for handling or manipulating a capsule.

455 Making a pocket in web material by folding and side sealing (e.g., flat bag making):

This subclass is indented under subclass 452. Methods for making a flat receptacle by overlapping a web of sheet material upon itself and seaming perpendicular to the fold line.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 450, for methods wherein marginal portions of web material are seamed during or after association of the contents with the web.
 562, for corresponding apparatus.

SEE OR SEARCH CLASS:

- 156, Adhesive Bonding and Miscellaneous Chemical Manufacture, appropriate subclasses for methods of folding and bonding laminae.
 493, Manufacturing Container or Tube From Paper; or Other Manufacturing From a Sheet or Web, subclasses 189+ for making a pliable container including heat sealing.

456 Forming three-dimensional receptacle from web or blank:

This subclass is indented under subclass 452. Methods for making a receptacle from sheet material and the shape of a cylinder or parallel piped is retained after filling.

- (1) Note. Methods which form sheet material in or around a forming device and fill the formed receptacle before or after removal from the former are found here.
 (2) Note. Also found here are methods which involve forming a receptacle from

a flat blank which may or may not be prescored.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 457, for methods involving erecting collapsed, previously formed receptacles.
- 563, for apparatus for forming receptacles around a forming device.
- 574+, for apparatus for filling a receptacle while on a forming means.

SEE OR SEARCH CLASS:

- 493, Manufacturing Container or Tube From Paper; or Other Manufacturing From a Sheet or Web, subclasses 52+ for making a rigid container from a sheet or web.

457 Opening or setting up collapsed, preformed receptacle:

This subclass is indented under subclass 452. Methods for erecting or expanding covers which are at least partially fabricated but collapsed, usually for storage purposes.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 492, for methods of opening, per se.
- 564+, for corresponding apparatus.

458 Box, carton:

This subclass is indented under subclass 457. Methods for setting up a freestanding receptacle made of rigid material such as cardboard.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 564+, for corresponding apparatus, especially subclass 566 for apparatus for setting up and horizontally loading boxes and cartons.

459 Bag, tube, center-folded web:

This subclass is indented under subclass 457. Methods in which the cover comprises a flexible wall receptacle which may be made of thermoplastic material or paper.

- (1) Note. The collapsed receptacle may comprise a bag, a tube, or merely a web pre-folded upon itself.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 469, for methods of filling and closing flexible receptacles.
- 567, 568, 570 through 573, for opening and filling flexible receptacles.

460 Envelope or triangular flap fold:

This subclass is indented under subclass 396. Methods in which the cover produced has sides contacting opposite portions of the contents which are connected by a single fold or crease or in which the packaging involves folding triangular flaps to form a flat package with the flaps overlapping centrally of one side of the package.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 206, for wrapping machines making pocket or envelope-type packages.

461 Wrapping contents including cover forming:

This subclass is indented under subclass 396. Methods for encasing the contents by bending or folding sheet cover material around the contents.

- (1) Note. The methods of this subclass shape the cover into contents-retaining form after association with the contents to completely enclose the contents.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 203+, for corresponding apparatus.
- 397+, for methods of wrapping contents in a partial cover.
- 450, for methods of enclosing contents within a tubular container.
- 452+, for methods of shaping a cover prior to association of the contents.

462 With slotted or scored wrapper blank:

This subclass is indented under subclass 461. Methods in which the cover material to be bent or folded has portions which are cutout or partially incised, adjacent an edge of the material.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 207+, for corresponding apparatus.

463 With heat sealing of wrapper:

This subclass is indented under subclass 461. Methods for modifying the temperature of the cover material sufficient to fuse or soften at least a portion or ingredient of such cover material to effect an attachment of contacting areas of the ends of the cover material.

- (1) Note. The portion of the cover fused may be either the surface of the cover material or an added coating layer on the cover material.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

373.7, for apparatus for heating or cooling an outturned closure seam and see the Notes thereto for art related to seam heating elsewhere classified.

477, for methods of closing covers involving heat sealing.

SEE OR SEARCH CLASS:

156, Adhesive Bonding and Miscellaneous Chemical Manufacture, appropriate subclasses as the generic home for making adhered seams and laminating processes for producing articles.

464 Cup or pouch forming about contents from web or blank:

This subclass is indented under subclass 461. Methods in which the shaping of the sheet cover material around the contents involves the formation of an open top bag or pocket.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

221+, for wrapping apparatus having a cover-wiping passage for forming a cup or pouch initial wrap about material.

452+, for methods in which an open top bag or pocket is formed prior to the placing of contents therein.

465 Cinching or wiping around to form initial wrap:

This subclass is indented under subclass 461. Methods for bending cover material about the contents including placing one edge or portion of the cover material against one side of the

contents, bringing the cover material across the opposite side of the contents, and then placing the other edge of the cover around the contents and into seaming relation to the first edge.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

210+, for corresponding subclasses.

466 U-fold forming initial wrap:

This subclass is indented under subclass 461. Methods in which the initial bending of the cover material about the contents is such that the two opposite, adjacent sides of the package have the cover smoothed along the sides so that the said sides and original contacting face of the cover material form a U in cross section.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

228+, for corresponding apparatus.

467 Filling preformed receptacle and closing:

This subclass is indented under subclass 396. Methods for depositing contents in a cover previously formed into a receptacle and subsequently completing the enclosure of the contents within the receptacle.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

266.1+, for corresponding apparatus.

452+, for methods which involve receptacle forming or shaping steps.

468 Opening prior to filling and closing:

This subclass is indented under subclass 467. Methods which include the step of uncovering a previously sealed or closed preformed receptacle prior to filling and closing.

- (1) Note. Merely opening a collapsed receptacle is not considered an uncovering step for this subclass.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

381+, for apparatus for opening receptacles.

457, for methods of opening or setting up a collapsed receptacle.

492, for methods of opening, per se.

469 Flexible, expandable receptacle (e.g., bag, tube):

This subclass is indented under subclass 467. Methods in which the cover member being filled is a flexible wall preformed receptacle such as a bag, pouch, tube, etc.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

452+, for methods of forming flexible wall containers and subsequently filling.

459, for methods of opening collapsed bags and subsequently filling.

SEE OR SEARCH CLASS:

141, Fluent Material Handling, With Receiver or Receiver Coating Means, subclass 10 for methods of filling self-closing bags (i.e., valve bags).

470 Aerosol container:

This subclass is indented under subclass 467. Methods for filling and closing an aerosol-type receptacle, e.g., the contents material is dissolved in or carried by a vaporizing propellant.

SEE OR SEARCH CLASS:

141, Fluent Material Handling, With Receiver or Receiver Coating Means, subclass 3 for the methods filling and closing of aerosol receptacles which close (i.e., self-closing) upon separation or uncoupling from the supply.

471 With separate closure attaching (e.g., cap or plug):

This subclass is indented under subclass 467. Methods for closing receptacles with a discrete closure member.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

485+, and 478, for methods of applying separate closure.

472 With protective media (e.g., shock absorbing):

This subclass is indented under subclass 467. Methods for including additional material with or around the primary contents to protect against vibration, shock, or rough handling.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

474, for methods of filling containers with diverse contents.

SEE OR SEARCH CLASS:

206, Special Receptacle or Package, subclass 521 for shock protection type packages and other appropriate subclasses for packages for fragile articles.

473 Filling preformed receptacle:

This subclass is indented under subclass 396. Methods for depositing article contents in a cover previously formed into a receptacle.

(1) Note. This subclass is restricted to methods of placing an article or fluent material in a definite, permanent pattern or arrangement in the receptacle.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

235+, for corresponding apparatus.

443+, for methods of group forming contents.

452+, for methods of forming and filling a receptacle.

467+, for methods of filling and closing a receptacle.

SEE OR SEARCH CLASS:

141, Fluent Material Handling, With Receiver or Receiver Coating Means, subclasses 1+ for methods of filling a receiver with fluent material and for arranging fluent material in a receiver where such arrangement is merely the result of the flow of material into the receiver or the action of a discharge assistant.

474 With diverse contents:

This subclass is indented under subclass 473. Methods for successively filling the receptacle with contents that differ in shape, form, or size, e.g., a crate of eggs and dividers between each layer.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

238+, for corresponding apparatus.

- 445, for grouping together diverse elements to form a group contents prior to depositing into a receptacle.
- 472, for methods of filling and closing a receptacle containing protective media for the contents.
- 475 With successive like contents or layers on like contents:**
This subclass is indented under subclass 473. Methods for filling a receptacle progressively by placing in turn a plurality of single articles of groups of articles therein.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
244+, for corresponding articles.
- 476 Closing package or filled receptacle:**
This subclass is indented under subclass 396. Methods for completing the enclosure of contents within a package or receptacle.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
285+, for corresponding apparatus.
417, for methods of applying a clip to a bag neck.
418, for methods of sewing a container closed.
- SEE OR SEARCH CLASS:
29, Metal Working, subclasses 592+, or methods of mechanical assembly.
100, Presses, subclass 54 for portable receptacle lid applying.
112, Sewing, subclass 11 for sewing closed a filled sack.
413, Sheet Metal Container Making, subclasses 31+ for roller die seaming means.
- 477 By heating sealing:**
This subclass is indented under subclass 476. Methods including the step of modifying the temperature of the cover material or closure element to facilitate completing the encasement of the contents.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
370.7+, 373.7+, 376.6+, 379, and 387.4, for apparatus for closing packages involving temperature modification of the package cover or closure.
- 463, for methods of heat sealing wrappers.
- SEE OR SEARCH CLASS:
156, Adhesive Bonding and Miscellaneous Chemical Manufacture, appropriate subclasses for methods of heat sealing.
219, Electric Heating, appropriate subclasses for methods of electric heating.
- 478 Separate closure:**
This subclass is indented under subclass 477. Methods in which the closure element is independent of the cover receptacle until bonded thereto.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
471, for methods of filling and then closing a container with separate closure.
485, for methods of applying separate closures in the absence of heat sealing or bonding.
- SEE OR SEARCH CLASS:
156, Adhesive Bonding and Miscellaneous Chemical Manufacture, subclass 69 for applying end closures to containers.
- 479 Of preformed nonfreestanding container deformed by contents (e.g., bag, tube):**
This subclass is indented under subclass 477. Methods in which the cover comprises a flexible wall receptacle.
- (1) Note. The cover material is usually thermoplastic material or paper.
- SEE OR SEARCH THIS CLASS, SUBCLASS:
455, for methods of making and filling bags.
459, for methods of opening and filling bags, tubes, etc.
469, for methods of filling and closing bags, tubes, etc.
480, for methods of closing bags, tubes, etc., by steps other than temperature modification of the cover material.

480 Closing preformed container deformed by contents:

This subclass is indented under subclass 476. Methods in which the cover comprises a flexible wall receptacle.

(1) Note. The receptacle is normally limp until filled and depends on the contents to render it freestanding.

(2) Note. The receptacle is usually made of thermoplastic material or paper.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

476, for methods of closing a package wherein the cover is a wrapper.

479, for heat sealing flexible wall receptacle and see the notes thereto for related art elsewhere classified.

481 By collapsing mouth portion (e.g., to form single flap):

This subclass is indented under subclass 480. Methods for closing the receptacle by bringing together, in close facing relationship, oppositely disposed inner surfaces of cover material extending beyond the contents.

482 Folding or rolling-in:

This subclass is indented under subclass 481. Methods for doubling a single flap over upon itself after the inner surfaces have been brought together.

483 Twisting:

This subclass is indented under subclass 481. Methods for rotating the mouth end portion of the receptacle relative to the contents after the inner surfaces have been brought together to collapse the end portion.

484 Closing a preformed, freestanding, rigid or semi-rigid container (e.g., box, carton, bottle):

This subclass is indented under subclass 476. Methods for closing a prefabricated receptacle not deformed by or not taking the shape of the contents, for example, box, carton, bottle, etc.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

477+, for methods of closing a prefabricated receptacle wherein a temperature modification of the cover or closure is involved in completing the enclosure.

485 By applying a separate preformed closure (e.g., lid, cap):

This subclass is indented under subclass 484. Methods for completing the enclosure of the contents by securing a discrete closure member to the preformed receptacle.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

478, for methods of securing separate closures by heat sealing or bonding.

486 With receptacle deforming or shaping:

This subclass is indented under subclass 485. Methods for reshaping a receptacle before, during, or after the step of applying a separate closure in order to facilitate the application or securement of the closure to the receptacle.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

366, for apparatus which deforms portions of the receptacle to facilitate closure application.

487 With preliminary closure shaping:

This subclass is indented under subclass 485. Methods for altering the size or shape of a separate preformed closure before applying it to a receptacle.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

290+, for apparatus including preliminary closure-shaping means.

488 By conforming closure to container:

This subclass is indented under subclass 485. Methods for distorting portions of a closure element so as to frictionally interengage or interlock the closure with the container.

(1) Note. Included here are methods of securing a closure by so deforming the closure as to conform to threads or projections on the receptacle.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

329+, for corresponding apparatus.
486, for similar methods which involve significant shaping or deforming of the receptacle.

489 By plugging closure into container:

This subclass is indented under subclass 485. Methods for inserting a separate preformed closure within, or partially within an aperture of a filled receptacle to close the receptacle.

- (1) Note. Included here are methods of closing utilizing a resilient closure element which is compressed, inserted into a receptacle aperture, and allowed to expand to seal the aperture.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

264, for apparatus for applying closures of internally stoppered receptacles.
319+, for closure inserting devices.
488, for methods of closing receptacles including inserting closures into receptacle apertures and then conforming portions of the closure to the receptacle.

490 By screwing closure on container:

This subclass is indented under subclass 485. Methods for applying a separate preformed closure onto the open end or neck of a filled receptacle by relative rotation of the closure and receptacle.

- (1) Note. The relative rotation of the closure and receptacle normally effects an interengagement of threads or similar projections.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

317+, for apparatus for applying closures by relative rotation with respect to the receptacle.

491 By folding multiple preformed flap:

This subclass is indented under subclass 484. Methods for closing a package having plural, integral flaps by folding the flaps inwardly upon one another.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

376.4+, for corresponding apparatus.
458, for methods of erecting boxes.
462, for methods which shape a slotted blank around a contents.

492 Opening only:

This subclass is indented under subclass 396. Methods for (a) expanding or erecting a formed collapsed receptacle into a contents-receiving form or for (b) manipulating a portion of a cover or covering material to permit filling or other operation.

- (1) Note. Included here are methods of shifting or removing a closure or engaging a flap so as to uncover an aperture of a receptacle to permit filling, emptying, or treatment of the receptacle or contents.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

50, for apparatus for opening a filled package and inserting additional contents.
381.1+, for corresponding apparatus.
457, for methods of opening or erecting receptacles and subsequent filling.
468, for methods of opening, filling, and closing receptacles.
564+, for apparatus for opening and subsequently filling collapsed receptacles.

493 Of individual contents or group feed or delivery:

This subclass is indented under subclass 52. Apparatus wherein, in response to the sensing means, a control means brings about the starting, stopping, or continuation of the supply of the contents.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

55+, for apparatus in which both the supply of the contents and the supply of the cover are controlled concurrently.

SEE OR SEARCH CLASS:

- 141, Fluent Material Handling, With Receiver or Receiver Coating Means, subclasses 139, 153, and 192+ for automatic control of filling apparatus by the contents material.
- 198, Conveyors: Power-Driven, subclasses 855+ for devices for controlling the stopping of conveyors by the presence or absence of an article thereon.
- 235, Registers, subclass 132 for apparatus with control means operable on predetermined register reading.

494 Responsive to incomplete group or subgroup (no group - no feed):

This subclass is indented under subclass 493. Apparatus wherein the control is brought about by sensing the absence of one or more portions of a plural contents group.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 54, for apparatus which senses a contents deficient in some respect and ejects or deflects the deficient contents from the packaging line.
- 247, for apparatus for concurrently placing plural articles into a receptacle, each article being handled individually by the depositing mechanism.

495 Responsive to complete group or subgroup:
This subclass is indented under subclass 493. Apparatus including means to sense the completion of the accumulation of a contents group or subgroup composed of plural individual portions and, as a result of the sensing, to effect the feed of the accumulated contents as a unit.

496 Responsive to the presence of only the lead article of a completed group:

This subclass is indented under subclass 495. Apparatus wherein the sensing means comprise means to sense the proper position of only the leading article or articles of an accumulated group to signify completion of the group.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 537+, for apparatus for forming successive layers and depositing into receptacles.

497 Plural lead articles:

This subclass is indented under subclass 496. Apparatus in which the group comprises a plurality of rows or columns and wherein the sensing means senses the proper positioning of the leading article of each row or column to signify the completion of the group.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 539, for apparatus for grouping plural rows of articles and depositing the articles of a group.

498 By sensing each individual article of the group or subgroup:

This subclass is indented under subclass 495. Apparatus wherein the sensing means comprises means to sense each element or portion of the contents group to determine completion of the group.

499 Individual sensors (one for each article in the group or subgroup):

This subclass is indented under subclass 498. Apparatus including an individual sensing means for each individual element or portion of the group.

500 Single sensor for successively sensing each article of the group or subgroup (e.g., counter):

This subclass is indented under subclass 498. Apparatus in which a single sensing means, e.g., counter, successively senses in turn each element or portion of the group and effects the feed of the accumulated group based on a predetermined count.

- (1) Note. This subclass takes apparatus under the class definition including counting devices combined with mechanism to form counted articles into a group prior to their insertion or deposit into a cover. Devices which merely count articles as they are being deposited into a cover are not proper for this subclass.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

501, for apparatus for counting contents wherein no subsequent group accumulation and feed is claimed.

501 By totalizing of individual contents:

This subclass is indented under subclass 493. Apparatus wherein the control is brought about by means which sense the totality of the contents portions individually, e.g., counters.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

500, for apparatus in which the counting accompanies group forming and feeding.

SEE OR SEARCH CLASS:

198, Conveyors: Power-Driven, subclasses 502+ for counters combined with conveyors.

235, Registers, subclass 132 for mechanisms having control means operable upon a predetermined register reading.

502 By weight of contents:

This subclass is indented under subclass 493. Apparatus wherein the control is responsive to means which senses or measures the weight of the contents.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

167, for packaging apparatus combined with weighing scale.

SEE OR SEARCH CLASS:

141, Fluent Material Handling, With Receiver or Receiver Coating Means, subclass 83 for fluent material handling with receiver contents weighing.

177, Weighing Scales, appropriate subclasses for weighers, per se.

198, Conveyors: Power-Driven, subclass 504 for weighing on conveyor.

222, Dispensing, subclasses 52+ for automatic control of dispensing devices by weight of product.

503 By volume of contents:

This subclass is indented under subclass 493. Apparatus wherein the control is effected by means which senses or measures the volume of the contents.

(1) Note. Those devices which sense the rise of contents in a preformed receptacle and effect control based on the contents reaching a predetermined level are considered to be measuring volume for this subclass.

SEE OR SEARCH CLASS:

222, Dispensing, subclasses 52+ for automatic control of dispensed product by measurement of volume.

504 By dimension of contents:

This subclass is indented under subclass 493. Apparatus wherein the control is responsive to means which senses or measures a finite dimension, e.g., length, of the contents.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

503, for apparatus in which control is brought about by sensing a predetermined level of the contents.

505 Responsive to presence or absence of cover material (e.g., wrapper, receptacle, lid):

This subclass is indented under subclass 493. Apparatus wherein the sensing means senses (a) a normal or desired condition of the cover or (b) an abnormal or undesired condition of the cover and as a result feeds, interrupts, or otherwise controls the supply of the contents.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

53, for apparatus which senses packages deficient in some respect and ejects or deflects the deficient package from the packaging line.

SEE OR SEARCH CLASS:

141, Fluent Material Handling, With Receiver or Receiver Coating Means, subclasses 140+ and 156+ for apparatus where the material supply is controlled by sensing the presence of the receiver.

506 Responsive to absence of cover material (no can - no fill):

This subclass is indented under subclass 505. Apparatus wherein the sensing means senses that no cover is in position to receive the contents.

507 WITH ALARM, SIGNAL, OR INDICATOR:

This subclass is indented under the class definition. Apparatus having a register, recorder, counter, gauge, or display device for indicating a normal or abnormal condition, such devices consisting of an audible information-giving element or a changeable indicia-bearing device.

- (1) Note. For classification in this subclass there must be visible indicia or audible signal of some type. As to visual indicia there must be graduations, numbers, or markings to relate a condition. Counting devices which do not supply a visual or audible indication of the count are not proper for this subclass. A mere transparent viewing means is not considered to be a display device for this subclass.

SEE OR SEARCH THIS CLASS, SUBCLASS:

52+, and particularly 500 and 501, for counters which cause a control to bring about some change in the operation of an apparatus.

167, for counter combined with packaging apparatus.

SEE OR SEARCH CLASS:

141, Fluent Material Handling, With Receiver or Receiver Coating Means, subclass 94 for filling systems having signals, indicators, recorders, inspection means, and similar combined devices.

221, Article Dispensing, subclass 2 for article dispensers having signals, indicators, and recorders.

222, Dispensing, subclass 23 for dispensing devices having signals, indicators, and recorders.

508 Visual or audible alarm:

This subclass is indented under subclass 507. Apparatus in which the condition-indicating device produces an alarm which can be seen or heard by a machine operator.

SEE OR SEARCH CLASS:

221, Article Dispensing, subclass 3 for audible alarm in dispensing devices.

509 SKIN PACKAGING:

This subclass is indented under the class definition. Apparatus including means to enclose a contents between sheet material comprising a flat base sheet and a covering sheet in which the covering sheet is forced by fluid pressure, e.g., vacuum, into tight engagement with the contents and is secured at its free margins to the base sheet to form a thin, skinlike covering over the contents.

- (1) Note. If the base sheet is formed with a product-retaining recess either before or during packaging, the patent is excluded from the subclass.

- (2) Note. The fact that the contents may be subject to the effects of the fluid pressure which forces the cover sheet into engagement with the contents will not preclude classification in this subclass unless an inert gaseous atmosphere is provided thereby.

SEE OR SEARCH THIS CLASS, SUBCLASS:

427, for corresponding methods.

511, for apparatus for forming a receptacle and subjecting contents thereof to a vacuum or inert gaseous atmosphere.

510 Vacuum or inert atmosphere:

This subclass is indented under subclass 111. Apparatus in which the contents material is subjected to the action of either a partial vacuum or a gas which does not react with the contents.

- (1) Note. The vacuum or inert gas atmosphere may or may not be continued within the package after the closing thereof.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 79+, for apparatus for gas filling or evacuating a receptacle and then closing the receptacle.
- 403+, for methods of gas filling and/or evacuating receptacles and closing the receptacle.
- 432+, for methods of packaging including treating the contents by subjecting it to a vacuum.
- 527, for apparatus which utilize suction to compact material.

SEE OR SEARCH CLASS:

- 141, Fluent Material Handling, With Receiver or Receiver Coating Means, subclasses 37+ for closed systems for gas filling or evacuation of a receiver or modification of the gaseous conditions in a receiver being filled with fluent material; subclass 70 for fluid treatment of contents not in a closed system, i.e., jetting.

511 **With receptacle forming:**

This subclass is indented under subclass 510. Apparatus including means to fabricate a cover material into a shape capable of confining a contents.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 509, for apparatus for conforming a cover sheet about contents on a base by fluid pressure, i.e., skin packaging, in which the contents may be incidentally subject to a vacuum during packaging.
- 558+, for apparatus for forming or partially forming a receptacle and subsequently filling.

512 **With preformed bag:**

This subclass is indented under subclass 510. Apparatus in which the cover for the contents being treated comprises a prefabricated pouch-like receptacle of flexible material.

513 **Cutting:**

This subclass is indented under subclass 113. Apparatus in which the material is subjected to a force acting along a predetermined line which

severs the material into two or more smaller portions.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 389.1, for apparatus for feeding and cutting cover material.
- 435, for corresponding methods.

SEE OR SEARCH CLASS:

- 83, Cutting, appropriate subclasses for cutting device, per se.
- 425, Plastic Article or Earthenware Shaping or Treating: Apparatus, subclasses 289+ for severing means.

514 **Food or edible material:**

This subclass is indented under subclass 513. Apparatus in which the material is a food product or other edible material.

515 **Fruit or vegetable:**

This subclass is indented under subclass 514. Apparatus in which the food product is a fruit or vegetable.

516 **Bread, pastry, or confection:**

This subclass is indented under subclass 514. Apparatus in which the product is a bread, pastry, or confection.

(1) Note. Candy cutting is found here.

517 **Meat or fish product:**

This subclass is indented under subclass 514. Apparatus in which the contents comprise a meat or fish product.

518 **Dairy product:**

This subclass is indented under subclass 514. Apparatus in which the contents comprise a dairy product.

(1) Note. The cutting of ice cream is found here.

519 **Butter:**

This subclass is indented under subclass 518. Apparatus in which the dairy product is butter.

520 Film, sheet or weblike material:
This subclass is indented under subclass 513. Apparatus in which the material includes paper, photographic film, or other sheetlike contents.

521 Stuffing (e.g., mattress ticking):
This subclass is indented under subclass 513. Apparatus in which the contents comprises a mass of fibrous material used to stuff mattresses and cushions.

522 Strand, tube, or rodlike material (e.g., drinking straw):
This subclass is indented under subclass 513. Apparatus in which the material comprises (a) filamentary or strand material or (b) cylindrical articles, the diameters of which are small in comparison with their lengths.

523 Compacting or stretching:
This subclass is indented under subclass 113. Apparatus in which the contents material is subjected to mechanical forces which (a) crowd portions of the contents into a more confined space or which (b) contract or elongate the contents material within its elastic limit.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

114, for apparatus for encasing coil springs.

436, for corresponding methods.

SEE OR SEARCH CLASS:

100, Presses, appropriate subclasses for compacting apparatus, per se.

141, Fluent Material Handling, With Receiver or Receiver Coating Means, subclasses 71+ for compacting fluent materials in receivers.

524 Mattress filling:
This subclass is indented under subclass 523. Apparatus for compacting fibrous material into a batt and placing it within a cover to form a mattress.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

114, for apparatus for encasing coil springs.

255, for apparatus including forms in which the contents is placed, the form and contents then being inserted into a cover and the form removed leaving the contents in the cover.

521, for apparatus including cutting fibrous material.

SEE OR SEARCH CLASS:

28, Textiles: Manufacturing, subclasses 118+ for apparatus for compacting loose fibers into a wad or tampon and inserting same into a sheath.

141, Fluent Material Handling, With Receiver or Receiver Coating Means, subclasses 71 and 249 for compacting or reshaping a charge of fluent material comprising fibrous material and placing same into a receiver.

525 By agitation:
This subclass is indented under subclass 523. Apparatus for shaking, vibrating, or jarring the contents to crowd the same into a more confined space.

(1) Note. The agitation must occur while the contents is in the receptacle or cover. Agitation of the contents in the supply or during feeding thereof is not considered to be treatment for this subclass.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

437, for corresponding methods.

SEE OR SEARCH CLASS:

141, Fluent Material Handling, With Receiver or Receiver Coating Means, subclasses 74+ for means to agitate contents in receiver.

221, Article Dispensing, subclasses 200+ for article dispensers with agitating means.

222, Dispensing, for fluent material dispensers with agitating means.

366, Agitating, appropriate subclass for agitating devices, per se.

526 Compressing with or through cover:

This subclass is indented under subclass 523. Apparatus in which the compressive force is applied to the contents material through the enclosing cover.

- (1) Note. Devices which (a) shape the filled package before or after sealing, (b) close hinged flap of a filled carton to compress the material therein, or (c) force a separate cover onto a container to compress the material are classified here.

527 Compressing contents within preformed receptacle:

This subclass is indented under subclass 523. Apparatus in which the compressive force is applied to the contents material after the material is placed in a preformed container.

- (1) Note. Devices which compress material in the container to either provide space for additional contents or to provide clearance for subsequent closing of the container are classified here.
- (2) Note. Devices which utilize suction or vacuum to compact material in a preformed container have been placed here.

528 Compressing while engaging contents with wrapper or band:

This subclass is indented under subclass 523. Apparatus in which the compressive force is applied to material in engagement with a cover, which cover is subsequently wrapped around the compressed contents.

529 Compressing before packaging:

This subclass is indented under subclass 523. Apparatus in which the compressive force is applied before the contents is associated with a cover.

- (1) Note. Devices which form a compressed load or charge and subsequently wrap or deposit the load into a container are found here.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

438, for corresponding methods.

530 Through restricted passage:

This subclass is indented under subclass 529. Apparatus in which the compressive force is applied by moving the contents through a restricted passage.

- (1) Note. The shaping of plastic material by extrusion is not herein contained.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

439, for methods of simultaneously conveying and compressing.

531 Layer, stack, or column:

This subclass is indented under subclass 147. Apparatus including means to form a group of contents portions (a) in a coplanar arrangement or (b) in a single, continuous orderly sequence or linear arrangement.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

443, for corresponding methods.

495, for a group-forming apparatus with automatic controls.

SEE OR SEARCH CLASS:

198, Conveyors: Power-Driven, subclasses 434+ for apparatus for arranging articles on conveyor.

221, Article Dispensing, subclasses 175+ forming a stack of articles and dispensing from the stack.

414, Material or Article Handling, subclasses 788.1+ for article stacking apparatus.

532 Assembling, gathering, and stacking coins or similar disc-like articles:

This subclass is indented under subclass 531. Apparatus for stacking or grouping disc-shaped articles, particularly coins, in a face-to-face relationship.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

212, for apparatus for wrapping a stack of coins.

254, for disc-packing apparatus.

533 Assembling sticks or chewing gum:

This subclass is indented under subclass 531. Apparatus for stacking or grouping slat or slab-like units of chewing gum.

- (1) Note. The group usually consists of five prewrapped sticks of gum which are then further wrapped as a unit.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

542, for apparatus for grouping articles on edge.

534 Receptacle advances as row groups are deposited therein:

This subclass is indented under subclass 531. Apparatus which form successive rows of contents portions and deposit the rows in turn a receiver or receptacle and move the receptacle during or between the deposit of each row group.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

244+, for apparatus for successively depositing articles in a receptacle.

535 Lowered support or raised wall:

This subclass is indented under subclass 531. Apparatus including means for depositing the contents portions on a collecting or receptacle-holding member, said member being depressed as the portions are deposited thereon, or there being an additional member which at least partially encircles the contents portions and is elevated as the portions are deposited on the collecting member.

- (1) Note. This subclass includes apparatus for forming groups of articles and successively depositing the groups in a receiver or receptacle carried by a support which is lowered as the groups are deposited.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

245, for apparatus which successively deposit articles in a receptacle wherein the receptacle is lowered as the articles are deposited therein.

SEE OR SEARCH CLASS:

- 141, Fluent Material Handling, With Receiver or Receiver Coacting Means, subclasses 258+ and 263+ for fluent material filling systems having receiver support and filling means relatively receding during filling.
414, Material or Article Handling, subclasses 924+ for article handling apparatus with a lowerable receiver.

536 Within receptacle:

This subclass is indented under subclass 535. Apparatus in which a collecting member is depressed while situated inside of the receptacle in which the contents portions are to be enclosed.

537 Forming successive coplanar layers and depositing in cover means:

This subclass is indented under subclass 531. Apparatus including means to form in turn a plurality of coplanar groups of contents portions and subsequently deposit the groups in a cover.

- (1) Note. The layers may be successively deposited in the receptacle as the layers are formed or a plurality of layers may be grouped and deposited as a unit in the cover.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 150, for apparatus for forming separate rows of long slender articles and placing the rows atop one another.
153, for apparatus for forming a plurality of layers of articles in vertically spaced ways and ejecting the layers into a receptacle.
244, for apparatus for successively depositing articles in a receptacle.
534, for apparatus for successively forming rows of contents portions and advancing a receptacle as the row groups are deposited therein.

538 Varying strokes of depositing means:

This subclass is indented under subclass 537. Apparatus including a reciprocating member for moving and depositing the successive layers of contents portions in a receptacle and

wherein the length of the reciprocation of the member varies during the cycle of filling each receptacle.

539 Simultaneous deposit to fill compartmented receptacle:

This subclass is indented under subclass 531. Apparatus for forming a group of contents portions and depositing the group as a unit into a receptacle divided in plural sections, each section receiving one contents portion.

SEE OR SEARCH THIS CLASS, SUBCLASS:

246, for apparatus for successively depositing articles in the sections of a compartmented receptacle.

247, for apparatus for simultaneously depositing plural articles into a receptacle.

534, for apparatus for successively forming rows of contents portions and advancing a receptacle which may be compartmented as the row groups are deposited therein.

540 Stacking one article or group of articles upon another:

This subclass is indented under subclass 531. Apparatus for placing contents portions comprising singular units or singular rows one upon the other in vertical array and subsequently completing the packaging of the group as stacked.

SEE OR SEARCH THIS CLASS, SUBCLASS:

535, for apparatus involving stacking on a lowerable support.

537, for apparatus which stack successive coplanar layers.

541 Building up the stack from the bottom:

This subclass is indented under subclass 540. Apparatus for elevating successive contents portions in order to form a stack from below.

SEE OR SEARCH THIS CLASS, SUBCLASS:

242+, for apparatus which deposits articles into the bottom of a receptacle by means of an elevatable mechanism.

537+, for apparatus which form successive layers by means of an elevating mechanism.

SEE OR SEARCH CLASS:

414, Material or Article Handling, subclasses 794.9+ for apparatus for stacking articles from below.

542 Grouping articles on edge in a linear relationship:

This subclass is indented under subclass 531. Apparatus for arranging normally thin or flat articles in a face-to-face horizontal array.

SEE OR SEARCH THIS CLASS, SUBCLASS:

532, for apparatus for stacking disc-like articles on edge.

SEE OR SEARCH CLASS:

414, Material or Article Handling, subclasses 798.2+ for apparatus for piling articles on edge.

543 Forming single generally horizontal groups comprising plural rows and columns:

This subclass is indented under subclass 531. Apparatus for forming a single coplanar arrangement comprising multiple rows and columns of singular articles wherein the arrangement comprises the sole contents of the package.

SEE OR SEARCH THIS CLASS, SUBCLASS:

537, for apparatus for forming successive coplanar groups.

539, for apparatus for the simultaneous deposit of a group to fill a compartmented receptacle.

544 Oriented one or more units of the group:

This subclass is indented under subclass 531. Apparatus for changing the attitude of one or more articles of a group with respect to other members of the group.

SEE OR SEARCH THIS CLASS, SUBCLASS:

533, for apparatus for assembling sticks of chewing gum wherein certain sticks may be inverted with respect to others in a stack.

SEE OR SEARCH CLASS:

198, Conveyors: Power-Driven, sub-classes 373+ for apparatus for orienting articles on a conveyor.

545 PROGRESSIVELY SEAMED COVER WEB OR WEB FOLDS:

This subclass is indented under the class definition. Apparatus (a) for folding a single web of cover material longitudinally thereof and over upon itself as the web advances to produce at least one longitudinal seam thereon opposite the fold, (b) for assembling a plurality of generally parallel, spaced or superposed webs as they are advanced by forming longitudinal seams at least at the outer longitudinal edges thereof whereby a tube is formed, the seaming operation occurring concurrently with or subsequent to the association of the contents with the cover material, or (c) for assembling spaced or superposed webs and forming transverse seams to produce transverse tubular covers which may or may not be subsequently longitudinally seamed.

- (1) Note. The seam may be secured by an operation such as heat sealing, folding, pasting, etc.
- (2) Note. If the web is formed by heat or pressure into contents-retaining form (e.g., stretch forming), the patent is excluded from this subclass.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

128.1+, for apparatus which secures a seam by the use or application of a cover adjunct, e.g., staple, sealing strip, thread, etc.

450, for corresponding methods.

559, for apparatus for stretch forming receptacles from a web.

SEE OR SEARCH CLASS:

112, Sewing, appropriate subclasses for apparatus for forming a seam by stitching.

156, Adhesive Bonding and Miscellaneous Chemical Manufacture, appropriate subclasses for laminating

devices, per se, when not combined with filling operation, see especially subclasses 461+ for apparatus for longitudinally bending an endless web and forming a seam; and subclasses 543+ for joining endless webs.

- 219, Electric Heating, subclasses 200+ for electric heaters which may be employed for seaming.
- 452, Butchering, subclasses 32+ for sausage stuffers and subclasses 46+ for sausage linkers.
- 493, Manufacturing Container or Tube From Paper; or Other Manufacturing From a Sheet or Web, subclass 248 for making a pliable container including infeeding a blank to a passive folder.

546 Multirow:

This subclass is indented under subclass 545. Apparatus having means to form two or more longitudinally extending tubes in the cover material wherein each tube has its contents segregated from the contents of the other tube or tubes.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

202, for apparatus in which two or more separate streams of contents are coincidentally packaged as they move through the machine.

547 With package severing and subsequent closing of severed end:

This subclass is indented under subclass 545. Apparatus including means to transversely cut or separate the cover after a longitudinal seam is formed and thereafter closing the severed ends to complete the enclosure of a plurality of individual package units.

- (1) Note. The severed ends of the package units may be closed by any suitable means such as by twisting, folding, heat sealing, gluing, etc.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

548+, for apparatus in which severing may occur concurrently with or subsequent to transverse seaming.

SEE OR SEARCH CLASS:

83, Cutting, appropriate subclass for apparatus for feeding and cutting webs.

548 With closing of web between package units:

This subclass is indented under subclass 545. Apparatus including means to periodically form a seam transversely of the web to thereby isolate the contents into package units.

(1) Note. For this and indented subclasses the transverse seam may be formed prior to the longitudinal seam.

(2) Note. For this and indented subclasses the means for forming the transverse seam may also simultaneously sever the cover along the seam.

549 By twisting:

This subclass is indented under subclass 548. Apparatus including means to form the transverse seam (a) by relatively rotating one portion of the tube with respect to a stationarily held adjacent second portion or (b) by relatively rotating two adjacent tube portions in opposite directions, the rotation being about the longitudinal axis of the tube whereby a coiled or convolved winding is produced forming a necked down section in the tube to segregate the package units.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

217, and 370, for apparatus to close a filled package by twisting.

483, for methods of closing packages by twisting.

550 Longitudinal tube formed from single web:

This subclass is indented under subclass 548. Apparatus in which a single web is folded longitudinally upon itself and seamed longitudinally to entube the contents prior to the formation of a transverse seam which isolates the contents.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

553, for apparatus for forming tubular covers from opposed webs.

551 Vertically disposed tube:

This subclass is indented under subclass 550. Apparatus for forming an upwardly open tubular cover, the longitudinal axis of which is maintained generally perpendicular to a horizontal plane during forming, filling, and closing.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

451, for corresponding methods.

552 Concurrent severing:

This subclass is indented under subclass 551. Apparatus including a device which seams the cover transversely between adjacent contents units and simultaneously separates the cover along that seam.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

550, for devices which concurrently seal and sever a horizontally disposed tube.

SEE OR SEARCH CLASS:

83, Cutting, appropriate subclasses for apparatus for feeding and cutting webs.

156, Adhesive Bonding and Miscellaneous Chemical Manufacture, subclass 515 for devices which simultaneously seam and sever.

553 Plural webs:

This subclass is indented under subclass 548. Apparatus for enclosing articles or quantities of material between distinct, opposed webs.

554 Vertically disposed tube:

This subclass is indented under subclass 553. Apparatus whereby two or more webs are joined for forming an upwardly open tubular pocket closed on three remaining sides, the transversely formed seam serving to close one pocket while providing the bottom seam for a succeeding pocket.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

551, for apparatus forming an upwardly open pocket from a single web.

555 Simultaneously longitudinal and transverse seaming:

This subclass is indented under subclass 533. Apparatus in which a longitudinal and transverse seam is made simultaneously to completely isolate the contents.

556 APPARATUS FOR CONTRACTION OF COVER BY STRETCHING OR SHRINKING:

This subclass is indented under the class definition. Apparatus for associating a cover or cover material with its contents and then drawing the cover or cover material into tight frictional engagement about or against the contents by elastic memory of the cover or cover material.

- (1) Note. Included here are devices which stretch a cover to a slightly larger cross section than the contents and then allow the cover to shrink tightly over the contents.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 255+, for apparatus including devices which may enter and incidentally stretch a cover receptacle.
441, for corresponding methods.

557 By heat shrinking:

This subclass is indented under subclass 556. Apparatus in which the cover or cover material is contracted by raising its temperature.

- (1) Note. Heat shrinking apparatus per se are not included here unless combined with means to associate the cover with the contents.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 287+, for devices which apply a separate closure by shrinking.
442, for corresponding methods.
580, for apparatus which apply a partial cover which may be subsequently heat shrunk about the contents.

SEE OR SEARCH CLASS:

- 34, Drying and Gas or Vapor Contact With Solids, subclass 201 for heat-shrinking apparatus, per se.
219, Electric Heating, subclasses 385+ for electrically heated shrinking ovens.

558 APPARATUS FOR FORMING OR PARTIALLY FORMING RECEPTACLE AND SUBSEQUENTLY FILLING:

This subclass is indented under the class definition. Apparatus including means to fabricate a cover material into a shape capable of at least partially confining a contents prior to the association of the contents with the cover receptacle so fabricated.

- (1) Note. See Glossary of the class definition for “receptacle” as here used.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 48, for fabricating a carrier-type package.
452+, for corresponding methods.
545+, for apparatus for forming a receptacle by a progressively formed cover, web, or web fold.

SEE OR SEARCH CLASS:

- 156, Adhesive Bonding and Miscellaneous Chemical Manufacture, appropriate subclasses for apparatus for forming receptacles including adhesive bonding.
413, Sheet Metal Container Making, appropriate subclasses for can making.
425, Plastic Article or Earthenware Shaping or Treating: Apparatus, appropriate subclasses for shaping plastic receptacles.
493, Manufacturing Container or Tube From Paper; or Other Manufacturing From a Sheet or Web, subclasses 51+ for making a paper receptacle.

559 Forming a pocket, depression, or hollow compartment by application of heat or pressure (e.g., stretch forming):

This subclass is indented under subclass 558. Apparatus for shaping contents-receiving cavity or indentation in cover material by stressing and distorting a portion of the material against

or around a forming member to distend or constrict the material.

- (1) Note. The medium used to induce the shaping of the cavities may be positive pressure, vacuum, mechanical pressure, or temperature modification; however, there must be included a former element (e.g., a die) which controls the shape of the cavity or indentation.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 140, for apparatus for generating cover material in sheetlike form.
 141, for apparatus for preconditioning cover material prior to fabrication into a receptacle.
 453, for corresponding methods.
 511, for receptacle forming combined with treating the contents with gas or vacuum.
 556, for apparatus which stretch a cover material prior to association of the contents.

SEE OR SEARCH CLASS:

- 156, Adhesive Bonding and Miscellaneous Chemical Manufacture, subclass 500 for apparatus for casting, plastic molding, or extruding articles.
 425, Plastic Article or Earthenware Shaping or Treating: Apparatus, subclass 522 for apparatus for forming containers by direct application of fluid pressure.

560 Capsule:

This subclass is indented under subclass 559. Apparatus for encapsulating small dosages of fluent contents.

- (1) Note. The contents are usually but not limited to medicinal products.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 281+, for filling and closing preformed capsules.
 454, for corresponding methods.
 900, for apparatus and method for handling or manipulating a capsule.

561 Molding or extruding a container:

This subclass is indented under subclass 559. Apparatus for forming a discrete, thin-walled receptacle from thermoplastic material by extrusion or blow molding of the material.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 574+, for apparatus for filling receptacles while on the receptacle-forming means.

SEE OR SEARCH CLASS:

- 425, Plastic Article or Earthenware Shaping or Treating: Apparatus, subclasses 326 and 387 for blow-molding devices.

562 Forming a pocket or pouch by folding and side sealing (e.g., flat bag making):

This subclass is indented under subclass 558. Apparatus in which a single continuous web of material is folded longitudinally and seamed transversely to form a flat receptacle.

- (1) Note. See Class definition Glossary for the definition of the term "receptacle" as here used.
 (2) Note. The device may apply to either a single or plural transverse seams prior to filling, however, at least one transverse seam of a given receptacle must be completed prior to a longitudinal seal which may close that receptacle.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 455, for corresponding methods.
 548, for apparatus for forming progressively seamed tubes and subsequently closing between package units.

SEE OR SEARCH CLASS:

- 156, Adhesive Bonding and Miscellaneous Chemical Manufacture, appropriate subclass for fabricating bags involving adhesive bonding.
 493, Manufacturing Container or Tube From Paper: or Other Manufacturing From a Sheet or Web, subclasses 189+ for making a pliable container including heat sealing.

563 Forming a receptacle around a mandrel or former and removing therefrom prior to filling:

This subclass is indented under subclass 558. Apparatus in which the receptacle is made around a form and removed therefrom prior to filling.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

456, for methods of forming three-dimensional receptacles.

575, for apparatus in which the receptacle is filled around a form and filled before removal from the form.

564 Forming by opening or setting up collapsed receptacle:

This subclass is indented under subclass 558. Apparatus in which the cover receptacle is made or supplied in a formed but collapsed condition and is opened into contents-receiving form.

(1) Note. The collapsed receptacle is more than a mere notched or preformed sheet; it must be partially fabricated although collapsed, usually for storage purposes.

(2) Note. See Glossary of the class definition for the meaning of the term "receptacles".

SEE OR SEARCH THIS CLASS, SUB-CLASS:

48, for apparatus which opens or erects bottle or can carriers.

49, for apparatus for applying cover material to a necked-down portion of the bottle.

157, for devices which erect and assemble divider with contents.

381.1+, for apparatus for opening collapsed receptacles.

565 Gable-top carton (e.g., milk carton):

This subclass is indented under subclass 564. Apparatus for erecting a freestanding receptacle having sides adjacent its mouth prescored or prefolded to facilitate closing into a gable top.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

266.1+, for apparatus for filling and closing preformed containers.

563, for devices which form liquid- retaining containers around a solid mandrel.

566 Horizontally loaded box or carton:

This subclass is indented under subclass 564. Apparatus for erecting normally freestanding receptacle with their fill opening positioned in a vertical plane and subsequently filling the receptacle while so positioned.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

284, for apparatus for filling and closing receptacles open at opposite ends.

567 Flexible tubular stock - preformed continuous tube:

This subclass is indented under subclass 564. Apparatus in which the collapsed receptacle comprises a preformed continuous tube which may be further fabricated prior to filling.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

545+, for apparatus forming tubes by progressively seaming a cover web.

576, for devices storing expanded, preformed tubular stock on a mandrel.

568 Longitudinally prefolded web stock:

This subclass is indented under subclass 564. Apparatus in which the collapsed receptacle comprises a continuous web of flexible material flat folded longitudinally and stored upon itself.

(1) Note. The web after opening may be seamed transversely to isolate contents and simultaneously severed to separate the packaged unit from the folded web supply.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

562, for devices for folding and side-seaming webs to form flat bags.

569 Letter-type envelope:

This subclass is indented under subclass 564. Apparatus in which the receptacle (a) has sides contacting opposite portions of the contents which sides are connected by a single fold or crease and (b) is closed by a single triangular flap.

- (1) Note. The receptacle may be used to enclose postal matter for mailing.

SEE OR SEARCH THIS CLASS, SUBCLASS:

266.1, for apparatus for filling and closing envelopes.

376.3+, for devices for closing envelopes.

SEE OR SEARCH CLASS:

156, Adhesive Bonding and Miscellaneous Chemical Manufacture, subclass 441.5 for devices for sealing envelopes.

570 Bag or sack:

This subclass is indented under subclass 564. Apparatus in which the receptacle is a sack or pouch made of flexible material.

- (1) Note. The opening mechanism may open the bag from either a completely or partially collapsed condition, but the mechanism must have at least a portion the sole utility of which is to expand the bag.
- (2) Note. A filling spout or guide which also serves to expand a collapsed bag as it is slipped onto the spout is not considered a bag-opening device for this or indented subclasses, except when the empty bags are stored in a magazine. See (1) Note, subclass 571.

SEE OR SEARCH THIS CLASS, SUBCLASS:

255+, for inserted forms or guides for articles which may serve to expand a bag placed thereon. See (2) Note, above.

SEE OR SEARCH CLASS:

141, Fluent Material Handling, With Receiver or Receiver Coacting Means, appropriate subclasses, particularly subclasses 311+ and 390+ for filling heads or nozzles for fluent materials which may serve to expand a bag placed thereon. See (2) Note, above.

571 Magazine:

This subclass is indented under subclass 570. Apparatus in which a supply of bags is provided in a collapsed stacked condition with or without means to confine the stacks at the top or sides.

- (1) Note. This and indented subclasses include apparatus in which the bags are stored in a magazine, opened by any means and filled.

572 Filled before removal from magazine:

This subclass is indented under subclass 571. Apparatus in which the stacked bags are confined and have the contents deposited therein prior to complete disassociation from the confining means.

573 Combined extractor and opener:

This subclass is indented under subclass 571. Apparatus in which the same instrumentality which removes the bags from the stack also serves to expand or open the bags.

574 Forming receptacles whereby the receptacle is subsequently filled while on the forming means:

This subclass is indented under subclass 558. Apparatus in which the cover receptacle is made around or within a die or form and the contents is placed within the receptacle before it is removed from said die or form.

SEE OR SEARCH THIS CLASS, SUBCLASS:

561, for apparatus for molding or extruding thin-walled receptacles.

575 Hollow forming mandrel or plunger:

This subclass is indented under subclass 574. Apparatus in which the die or form includes a part fitting within the receptacle, said part

being provided with a space for receiving, or a channel for directing, the contents into the receptacle.

- (1) Note. The hollow forming part may be either stationary, as a mandrel, or movable, as a plunger.
- (2) Note. The hollow forming part may be the only forming part or it may be one of a plurality of cooperate forming means.

SEE OR SEARCH THIS CLASS, SUBCLASS:

563, for devices for forming a receptacle around a mandrel, the receptacle being removed before filling.

SEE OR SEARCH CLASS:

493, Manufacturing Container or Tube From Paper; or Other Manufacturing From a Sheet or Web, subclasses 162+ for forming a rigid container about a mandrel; and subclasses 25+ for forming a pliable container about a mandrel.

576 Tubular receptacle stored on mandrel:
This subclass is indented under subclass 575. Apparatus in which the forming member has an indefinite length hoselike receptacle shirred or gathered thereover.

SEE OR SEARCH THIS CLASS, SUBCLASS:

581, for apparatus for shirring or gathering a tubular cover onto a form.

577 Gathered mouth receptacle:
This subclass is indented under subclass 575. Apparatus in which the internal forming part or mandrel (a) coacts with the cover material to cause the material to be pleated therearound and formed into a receptacle with a single closed end or (b) has means to smooth a cover material there-about to form a receptacle with a single closed end, which receptacle is adapted to have its open end closed by forcing the open edges toward the center to form a puckered closed end.

578 External former:
This subclass is indented under subclass 574. Apparatus in which the die or form has a cavity within which the receptacle is made and in which the receptacle remains while the contents is being placed therein.

579 Former mounted on conveying means:
This subclass is indented under subclass 578. Apparatus in which the hollow die or form is carried on a movable support for presenting the filled receptacle to a closing means therefor.

580 PARTIAL COVER APPLICATION:
This subclass is indented under the class definition. Apparatus for applying a cover means and leaving a substantial portion of the contents exposed.

- (1) Note. The application of plural partial covers are here, except when they are superimposed or overlapped, for which see subclasses 170+ above.
- (2) Note. The partial encasement of the mouth portion of either a closed or opened bottle by means of a hood or crown closure (to either close the bottle or protect said closure) has not been considered partial cover application. See subclasses 287+ and Notes thereto for the locus of such art.

SEE OR SEARCH THIS CLASS, SUBCLASS:

48.1+, for apparatus for packaging multiple bottles or cans in carrier-type packages.
49, for apparatus for packaging bottles wherein some portion of the bottle remains exposed.
170+, for apparatus for applying plural superimposed or overlapped partial covers, and see (1) Note above, and particularly subclass 176 where one partial cover is a band.
287+, see (2) Note above.
397+, for corresponding methods of packaging.
558+, for apparatus for making a partial cover and then applying it.

SEE OR SEARCH CLASS:

- 156, Adhesive Bonding and Miscellaneous Chemical Manufacture, appropriate subclasses, and especially subclasses 446+ and 475+ for apparatus for applying a bond or label to a container or article where the applied label is adhered to the container or article.
- 242, Winding, Tensioning, or Guiding, subclass 471 for spirally wrapping tape about an article and subclasses 430+ for forming a composite article by wrapping material around a core.
- 493, Manufacturing Container or Tube From Paper; or Other Manufacturing From a Sheet or Web, subclasses 102+ for fixing a covering material to a box otherwise complete.

581 Spindle or core:

This subclass is indented under subclass 580. Apparatus for applying cover means in the form of spindles or cores which pass into or through an aperture in the contents, leaving the major portion of the contents exposed.

SEE OR SEARCH CLASS:

- 29, Metal Working, subclass 241 for apparatus for assembling parts by a stringing action, and see the search notes thereto for related art.

582 Band or tube:

This subclass is indented under subclass 580. Apparatus for applying the cover means which encircles the contents in one direction only, such as girth, but leaves both sides or ends thereof fully exposed, and which is in frictional contact with the contents so as to be retained thereon.

SEE OR SEARCH THIS CLASS, SUBCLASS:

- 135.1, for apparatus for applying nonencircling bands or labels.
- 138.6, for apparatus for binding completed packages by means of strands and/or wire.
- 169, for apparatus for applying the tubular shell part of a sliding tray and shell-type receptacle.

176, for plural superimposed cover and cover material applying apparatus in which at least one applied cover is a band.

399, for corresponding methods.

545, for apparatus which applies a band by progressively seaming one or more webs about the contents and successively severing the webs to form individual-banded units.

583 Bag neck banding:

This subclass is indented under subclass 582. Apparatus for applying a band to the gathered portion of a flexible container collapsed adjacent to the contents.

SEE OR SEARCH THIS CLASS, SUBCLASS:

138.2, for devices for applying a staple or clip to the mouth of a bag.

584 Cigar banding:

This subclass is indented under subclass 582. Apparatus for applying wrapper bands to cigars.

585 Preformed tube:

This subclass is indented under subclass 582. Apparatus for placing a prefabricated tubular member about a contents.

586 U-fold forming initial banding:

This subclass is indented under subclass 582. Apparatus in which a band is applied by contacting one face of the contents with the band and then so moving the contents that the two opposite sides of the contents have the band applied therealong so that the two sides and original contacting side of the band form a U in cross section.

SEE OR SEARCH THIS CLASS, SUBCLASS:

228+, for applying a wrapper with an initial U-fold operation.

587 Applied by rotation of contents:

This subclass is indented under subclass 582. Apparatus in which placing the band about the contents includes placing one edge of the band against the contents and then revolving the contents so that the other edge of the band is brought into seaming relation to the first edge.

SEE OR SEARCH THIS CLASS, SUB-CLASS:
211+, for applying a wrapper by rotation of the contents.

588 Applied by rotation of band:

This subclass is indented under subclass 582. Apparatus in which placing the band about the contents includes placing one edge of the band against the contents and revolving the band supply or the ultimate other edge of the band about the contents to bring the other edge of the band into a seaming relationship with the first edge.

SEE OR SEARCH THIS CLASS, SUB-CLASS:
210, for apparatus for applying a wrapper by rotation of same.

589 Applied by guiding band end about contents:

This subclass is indented under subclass 582. Apparatus in which placing the band about the contents includes guiding a first end via a guide means to form a loop about the contents and applying tension to close the loop about the contents.

590 Applied by manipulating opposed band ends about contents:

This subclass is indented under subclass 582. Apparatus in which placing the band about the contents includes positioning one side of the contents centrally of the band and bringing the respective ends of the band into seaming relationship on the opposite side of the contents.

- (1) Note. The initial positioning may include either placing the contents on the band or placing the band onto the contents.

591 Applied about series contents:

This subclass is indented under subclass 582. Apparatus in which banding material is applied serially to band together a plurality of individual articles in seriatim.

- (1) Note. The banded articles may be subsequently separated into discrete lengths or they may remain together in indefinite lengths.

592 Applied by manual operation:

This subclass is indented under subclass 582. Apparatus in which placing the band about the contents includes substantial manipulation of the contents, the band, or a banding tool by hand.

- (1) Note. The hand operation must involve more than the mere feed or positioning of the contents or band with respect to a banding apparatus.

593 End or band interleaved with contents (e.g., book or magazine band):

This subclass is indented under subclass 582. Apparatus having means to insert an end of a band-type cover between the leaves of a book or magazine, or between the elements of a stack or group, and to encircle the band about the book, magazine, group, or stack.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 157, for apparatus which introduce separators between adjacent units of a stack or group contents.

594 Uncovered reduced projection or handle (e.g., lollypop):

This subclass is indented under subclass 580. Apparatus for applying a partial cover to a contents comprising a main portion and an extending portion of lesser cross-sectional area, said apparatus having means to apply a cover to encase the main portion, leaving at least a part of the extended portion exposed.

- (1) Note. The extended portion usually serves as a handle for the contents.
- (2) Note. Lollypop and tooth brush packaging mechanisms which leave the handle exposed are here.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

- 49, for apparatus for applying covers or cover materials to bottles and which leave a portion of the bottle exposed.
- 134.1+, for apparatus for applying handles to a package.

CROSS-REFERENCE ART COLLECTIONS

900 Capsules:

Apparatus and method for handling or otherwise manipulating a capsule for packaging purposes.

- (1) Note. Capsule are generally employed to contain small doses of fluent material or small artificial such as medicinal products.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

266.1+, for apparatus for filling and closing a preformed receptacle.

454, for method of forming and filling a capsule.

560, for apparatus for forming and filling a capsule.

END